Consumer Attitudes to Energy Networks in Scotland

Final Report

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Prepared	Accent, Chiswick Gate, 598-608 Chiswick High Road, London, W4
Contact:	Matt Evans
E-mail:	matt.evans@accent-mr.com
Telephone:	020 8742 2211
File name:	J:\3262 Consumers' attitudes towards energy networks\WP\Report\3262rep04 FINAL.docx

Registered in London No. 2231083
Accent Marketing & Research Limited
Registered Address: 30 City Road, London, EC1Y 2AB

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Contents

Executive Summary

This report for Citizens Advice Scotland provides evidence of consumers' experiences of gas and electricity networks, and their priorities and needs in terms of future investment in the energy networks. It also explores how willing and able consumers are to engage with energy networks, which is likely to become increasingly important as the networks' roles continue to evolve through the forthcoming RIIO-2 price control period.

The research involved qualitative research alongside a nationally-representative survey of bill-payers across Scotland to provide robust results together with an understanding of why these views are held.

Awareness of electricity and gas networks

Consumer awareness of the electricity and gas distribution networks is very limited. A large majority cannot name their network company and knowledge of what they do is shallow. Around one in four (28%) correctly identify all of the network responsibilities, with a significant proportion conflating their roles with those of the energy generators and suppliers.

When given more information about what distribution companies do, most bill-payers (59%) do not believe they understand their functions well. These low levels of awareness and understanding of network responsibilities reflects the limited contact most have had with their network and the lack of a billing relationship between networks and their customers. Certainly, most consumers have not had any contact with their distribution networks (14% have contacted their DNO and 8% their GDN – mostly about problems with supply).

Satisfaction with electricity and gas networks

While the vast majority of consumers have not had (or recall having) direct interaction with their energy network, satisfaction with the services they provide is very high. Around 80% are satisfied with the service received where there has been contact, the reliability of supply and with the service they provide overall. Satisfaction with value for money is, however, slightly lower with around two in three satisfied. Even on this measure though, it should be noted that fewer than 10% are dissatisfied, with a significant minority (28% for both gas and electricity) giving a neutral response. Dissatisfaction with value for money is largely due to a general sense that energy costs are too high, rather than specific network service-related issues.

The main reasons for satisfaction with the networks are similar for both gas and electricity, and predominantly due to the reliability of the service and absence of supply interruptions. Consumers refer to the noticeable improvement in reliability (particularly with electricity) compared with previous years.

Consumers' priorities for future network investment

Consumers want to see networks giving greatest priority to delivering an affordable, safe and reliable service. The way that consumers want to see investment allocated indicates that all of the aspects tested - affordability, safety, reliability, protecting vulnerable customers, environmental impact, innovation and customer satisfaction – are important. Relatively few ignore any one area from their allocation of priority.

Customer satisfaction typically receives lower priority because most consumers have not had prior contact with their network and therefore do not see customer satisfaction as being particularly relevant (and being covered by reliability). Consumers generally prioritise immediate concerns (safety, reliability etc) above future ones; many consumers do not prioritise innovation as they find it hard to envisage the transition that the energy system needs to undergo, or the network changes that are required to deliver it.

Consumers apply very similar priorities for both electricity and gas, in terms of the ranking of different elements of the service as well as the degree of priority they give to each area.

Attitudes to changing energy behaviour and new technology

The majority are satisfied with their heating system but views are more divided among those not on the gas grid. A slight majority of those who only have electricity would prefer to change to gas central heating if they had the opportunity. This suggests that efforts to decarbonise domestic heating would need to overcome a distinct preference for gas-based heating.

A large majority of consumers (80%) report being willing to change their energy use in order to keep their energy bills down in the face of rising costs. However, the largest proportion (46%) would only change their behaviour by a 'small amount'. 13% would not change their behaviour, of which 7% would be willing to pay *more* to be able to continue to use energy when and how they want.

Interest in new ways of engaging with energy networks to reduce energy costs is relatively strong. Over half (59%) would be interested in time of use tariffs and between 30% and 40% would be interested in smart EV charging, domestic battery storage and smart electric storage heaters. Interest tends to be higher among those who have already adopted new forms of energy technology such as smart meters and renewable energy generation. However, consumers see two key barriers preventing adoption of these technologies; cost and practical barriers (such as '9-5' working hours). There is concern among some that a drive for increased flexible use of networks may penalise hard working people who are less able to adjust their behaviour to ensure they benefit.

A fair energy system

Most bill-payers, including a slight majority of those paying the higher level of charges, feel that North-South variation in distribution charges is unfair. However, when tested

qualitatively, consumers appreciate the reasons behind the variation in costs and, although seeing the situation as not being ideal, do not support the idea of paying more to enable customers in the North to pay the same amount as those in the South.

Most are supportive of the opportunity for energy users to take advantage of energy generation and storage technologies to reduce their network charges. Three in four feel it is right that they benefit from lower network charges.

There is widespread concern about how well lower income households may fare in a future energy system. Four in five bill-payers are concerned for the ability of lower income households to engage with these technologies to minimise their energy bills. These groups are perceived to be most in need of a reduction in bills but least able to benefit from technologies that enable them to do so. A large majority want to see the distribution companies assisting lower income household to adapt to the ways in which they can engage with their network. There is support - from around half of consumers - for a variety of tools to achieve this, including replacing heating systems with smart lower carbon options, offering advice on technologies and/or behavioural change to get lower prices, and direct funding to reduce the cost of smart technology. These initiatives are perceived to be of mutual benefit for consumers as well as the network companies.

1 INTRODUCTION

1.1 Background

Introduction

Citizens Advice Scotland (CAS) provides independent impartial advice to consumers on a wide range of issues and campaigns to influence social policy at a local and national level. CAS' Utilities Policy Team has been working in the electricity and gas distribution network sector in Scotland to ensure that consumers are charged fairly for the services received and that particular groups of consumers, notably those not on the gas grid, those in rural Scotland and vulnerable and/or low-income consumers are not at a disadvantage.

In Scotland two electricity Distribution Network Operators (DNOs) and one Gas Distribution Network (GDN) own and operate the cables and pipes that distribute electricity and gas from the national transmission network to homes and businesses:

- **Electricity**: Scottish and Southern Energy Networks (SSEN) and SP Energy Networks (SPEN), with their operating regions illustrated by Figure 1
- **Gas**: SGN

Figure 1: Electricity Distribution Map

Ofgem, which regulates these networks, is currently reviewing how the energy network is regulated through developing the next price control framework, RIIO-2[1]. The RIIO-2 price control period will last for five years and commences in 2021 for gas distribution and in 2023 for electricity distribution. In developing this framework, Ofgem is keen to ensure that consumers' views are incorporated, hence CAS wished to undertake research to measure and understand customer views on network related issues.

[1] Revenue=Incentives + Innovation + Outputs

Background

The energy market is undergoing, and over the RIIO-2 price control period will continue to undergo, considerable change. These changes will have important impacts for consumers in how they engage with energy networks and the price they pay for energy. There are two main issues which provide the context for this research.

Energy network prices

A proportion of customers' energy bills are attributed to network costs, typically 26% of the average dual fuel energy bill[2], which amounts to approximately £262 per household per year[3] in Scotland.

Ofgem's "*Regional Differences in network charges"* report[4] notes wide-ranging regional differences in electricity consumption, highlighting the fact that average consumption levels for households in North Scotland are significantly higher than elsewhere in Great Britain (GB), including South Scotland which is below the GB average. The report found that regional differences in electricity network charges are a principal driver of regional differences in electricity retail prices. The same was true of network charges for gas prices, although to a lesser extent.

CAS' 2016 report "*Hot off the Grid: Delivering energy efficiency to rural, off-gas Scotland*"[5] highlighted the fact that while the cheapest way of heating a home is via mains gas, 23% of Scottish households rely on more expensive fuel types, such as bottled gas or electricity, to heat their property. Many off-gas households are in rural areas and are vulnerable to fuel poverty owing to factors such as a greater prevalence of older properties which are harder to treat with energy efficiency measures.

A changing energy market

In its 2017 report "*Upgrading our Energy System: Smart Systems and Flexibility Plan*"[6] BEIS identified several developments in the energy market to make it a "smarter, more flexible energy system" with the aims of:

- removing barriers to smart technologies including storage
- enabling smart homes and businesses
- making markets work for flexibility.

Several studies have looked at how consumers understand the transitions required in the energy market, with recent CAS research[7] making several recommendations regarding

[2] Ofgem, *Understanding your gas and electricity bills*. Information correct as of: August 2017

[3] For a household with average UK single rate consumption. Based on Ofgem's Regional Differences in network charges report 2015.

[4]https://www.ofgem.gov.uk/sites/default/files/docs/2015/10/reg_charges_final_master_version_23_october_2015.pdf

[5] https://www.cas.org.uk/publications/hot-grid

[6]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633442/upgrading-our-energy-system-july-2017.pdf

[7] https://www.cas.org.uk/publications/pylons-pipes-and-people

future policy and practice. Some recommendations related to vulnerable Scottish consumers including:

- the need to prioritise those in the north of Scotland who pay some of the highest rates for electricity and are off the gas grid
- support for fuel poor customers off the gas grid
- appropriate support for vulnerable customers along with consumer protection.

While there are several research studies providing analyses of network charges, consumer attitudes to the changing energy market and flexible tariffs, CAS identified a gap in understanding of Scottish consumer views of the way energy networks are maintained, developed and used currently, and potential future changes for use. This research seeks to fill this gap.

1.2 Objectives

The objective of the research is to provide CAS with evidence of consumers' experiences of gas and electricity networks, and their priorities and needs in terms of investment in the energy networks. The research provides an understanding of how consumer views vary in different locations in Scotland and by different type of consumers.

CAS will use the research findings to advocate for consumers and inform industry debates and, where necessary, help it to challenge network companies' respective business plans.

In order to meet this objective, the research focused on the following topics:

- What are current levels of awareness of electricity and gas network issues?
  - Are consumers aware of who their network company is? Do they know what it does? Do they know how network costs are recovered?
  - What do consumers know about issues around the future of energy networks, such as demand side response, investment requirements to avoid network constraints, or plans to decarbonise the gas grid?

- How satisfied are consumers with the electricity network?
  - How does satisfaction with the level of network performance and service received vary by different consumer groups?

- What are consumers' priorities for electricity network investment?
  - What are different Scottish consumer groups' views on where/how network companies should prioritise future investment in the network?

- What are consumer attitudes to how we use electricity now and in the future?
  - If affordability is a key priority for consumers, whether consumers are willing to change their behaviour in response to periods of cheaper electricity - conversely how much are consumers willing to pay to not have to alter their behaviour/energy use?

- Are consumers willing to engage with and willing/able to pay for new technologies (such as smart electric storage heaters, domestic battery storage, smart EV charging) and/or new retail solutions (e.g. time of use tariffs based on lifestyle preferences).

- What are the current consumer attitudes towards the future of heat?
  - What are consumers' experience of their current heating system and what are their views on the electrification of heat versus the decarbonisation of the gas network?

- What does a fair electricity system look like?
  - Is it fair that households in different parts of the country pay different costs to have electricity distributed to them?
  - Is it fair that consumers who invest in 'behind the meter' energy technologies such as battery storage and solar PV, who import less electricity, but still require the network capacity to exist as a back-up, should pay less towards network charges?

- Support for vulnerable households
  - What are consumers' current attitudes to the level of support that energy network companies provide to vulnerable households? Should be increased or remain at current levels?
  - Should energy network companies be supporting households of lower socio-economic status to ensure that they are not left behind in the energy transition? If so, what should this support look like?

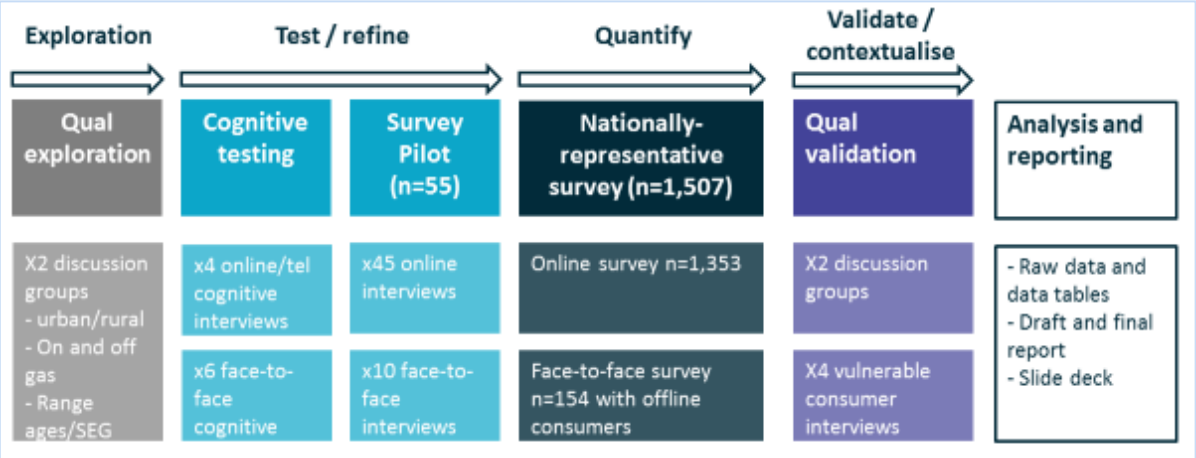
2 METHODOLOGY

2.1 Introduction

The issues which the research aimed to explore are complex and are relatively low salience subjects for many consumers. The research therefore used a four-stage process to provide robust results and context to the quantitative findings.

- **Stage 1:** Qualitative exploration of the key research topics to inform survey design and stimulus material development
- **Stage 2:** Testing and refinement of the survey materials through cognitive testing interviews and pilot survey
- **Stage 2:** Quantitative measurement of awareness and perceptions of key issues
- **Stage 3:** Qualitative validation and contextualisation of the quantitative findings through discussion groups and depth interviews.

Figure 2: Summary of research methodology



The research was undertaken in line with the requirements of the market, opinion and social research International Standard ISO 20252.

2.2 Stage 1: Qualitative exploration

The research commenced with a phase of qualitative research to understand how consumers approach these issues, and to inform the design of the survey questionnaire and supporting stimulus materials. Two discussion groups were held in Portobello, Edinburgh on 8th January, Edinburgh.

The two groups were recruited to provide a range of energy bill payers. Groups were split by social grade.

Table 1: Stage 1 focus group profile

Quota group	Group 1	Group 2
SEG (Socio-Economic Grade)	C2DE	ABC1
Life-stage	Mix of pre-family, family, empty nester	Mix of pre-family, family, empty nester
Gender	Mix of gender	Mix of gender
On/off gas grid	Mix of on and off gas	Mix of on and off gas
Urban / rural	Mix of urban and rural	Mix of urban and rural

2.3 Stage 2: Testing and refinement

Following the qualitative phase and the development of the survey questionnaire, a cognitive testing phase was used to ensure that all research materials were clear, understandable and interpreted in the way intended. Interviews were with a range of consumers, as follows:

Table 2: Cognitive testing interview details

Dates	Method	Gender	On/off gas	Social Grade	Age	Health condition	Urban/ Rural
12-19th February	4 Telephone 6 Face-to-face	4 Male 6 Female	4 Off-gas 6 Gas/ electricity	1 A/B 5 C1/C2 4 D/E	3 18-34 3 35-54 4 55+	3 with medical condition / disability significantly affecting daily activities	4 Rural 6 Urban

2.4 Stage 3: Quantitative measurement

The quantitative research comprised a survey of energy bill-payers aged 16+ across Scotland. Participants were screened to be responsible, solely or jointly, for paying their household's energy bill. The screening questionnaire also checked participants' status with regard to age, gender, SEG, whether they have a mains gas supply and their location (region and urban or rural status).

The geographic based information was determined by the participants' postcode. A postcode lookup file was used to identify the individual's parliamentary region, their urban/rural status and the DNO which services their area.

Participants took part in the survey either via an online panel survey, or in-home Computer-Assisted Personal Interview (CAPI).

The majority of the sample (n = 1,357) participated via the online survey. This was supplemented with an in-home survey (n = 154) to ensure coverage within the sample of offline consumers and harder to reach bill-payers who might be less likely to participate in an online survey. The in-home survey therefore targeted individuals who were older, lower SEG, or without access to the internet at home.

Quotas were set on parliamentary region, urban/rural status, on/off-gas grid, age, gender and SEG to ensure that the sample was representative of the population on these measures. The quotas were set on the basis of:

- NRS 2011 Census (age, gender, SEG and parliamentary region)8
- The National Readership Survey for January- December 2016 (SEG) 9
- Scottish Government's urban / rural classification[10]

Data was weighted – by the characteristics in Table 3 - to correct for any over or under-representation of particular groups.

Table 3: Survey weighting

Quota variable		Unweighted	Weighted
SEG	AB	22%	19%
	C1C2	53%	54%
	DE	25%	28%
Gender	Male	49%	49%
	Female	51%	51%
Age	16 to 29	12%	22%
	30 to 64	59%	57%
	65 and over	29%	21%
Urban/Rural	Urban	83%	83%
	Rural	17%	17%
Region	Central Scotland	11%	9%
	Glasgow	10%	11%
	Highlands and Islands	9%	10%
	Lothian	12%	11%
	Mid Scotland and Fife	12%	11%
	North East Scotland	19%	23%
	South Scotland	15%	13%
	West Scotland	12%	12%
On/off gas	On gas	80%	74%
	Off gas	20%	26%

[8] https://www.scotlandscensus.gov.uk/ods-web/standard-outputs.html
[9] http://www.nrs.co.uk/nrs-print/lifestyle-and-classification-data/social-grade/
[10] https://www2.gov.scot/Topics/Statistics/Browse/Agriculture-Fisheries/PubRural

The questionnaire was designed – drawing on the results of the initial stages of the qualitative research – by Accent and approved by Citizens Advice Scotland. The full questionnaire is included in the appendices.

Pilot

Prior to the survey being launched, a pilot, comprising 45 online interviews and 10 in-home interviews, was conducted to test:

- the recruitment process (including of the vulnerable groups)
- the clarity and flow of the questionnaire
- the appropriateness of the language used
- the accuracy of all routings
- ease of use of the supporting show material
- the interview duration
- the survey hit rate

Following the pilot, a series of improvements were made to the CAPI interviewer instructions and presentation of show screens. As a result of the changes, the pilot CAPI interviews were not included in the main sample. The questionnaire used for the online survey only had very minor changes and so the 45 pilot interviews from this element were included in the final sample.

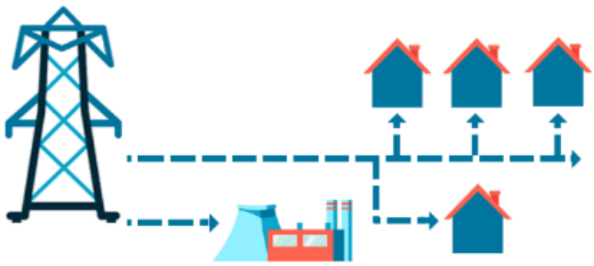
Presentation of information about the energy system

The survey covered complex topics and required participants to prioritise the areas they believed energy networks should focus future investment on. A variety of tools were used to give participants the necessary context for them to understand the issues affecting the energy market and the drivers of change. These included animated images to illustrate the ways in which the energy system is changing, an example of which is included in Figure 3.

Figure 3: Screenshots of examples of presentation of energy system information

Please now read the following information about ways in which the energy system is changing.

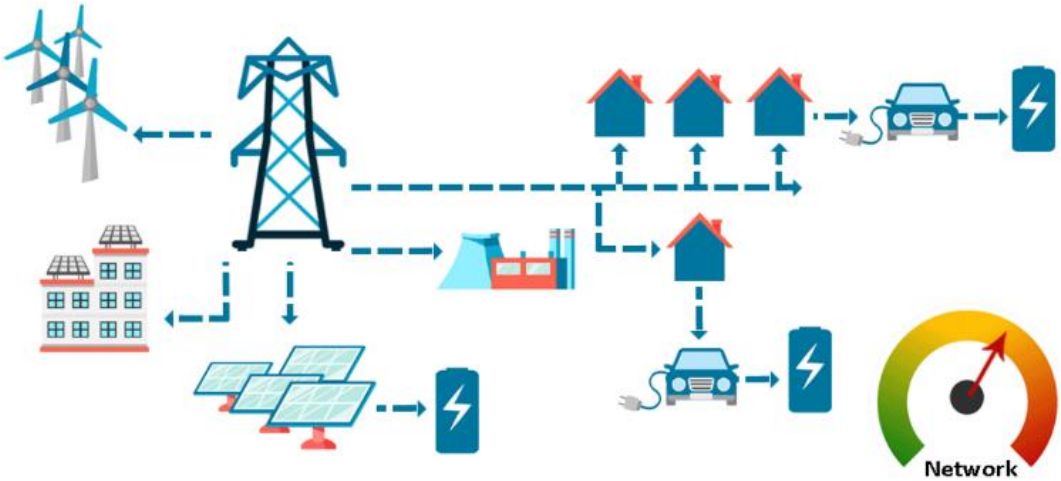
Much of the electricity network that provides homes and businesses with power was built in the 1950s and 1960s.



The requirements of the electricity network are rapidly changing and investment is needed to bring it up to modern standards.

In recent years there has been significant growth in technologies like electric vehicles and small-scale battery storage.

Battery storage refers to domestic batteries that allow you to store energy from things like solar panels or electric vehicles, to then use the power at a time that you need, reducing your need to buy energy.



Fieldwork timings

Fieldwork dates were as follows:

- Online:
  - Pilot: 6th March 2019
  - Mainstage: 22nd March – 12th April 2019
- CAPI:
  - Pilot: 7th – 8th March 2019
  - Mainstage: 30th March – 11th April 2019

2.5 Stage 4: Qualitative validation and contextualisation

Following the completion of the quantitative stage, a second qualitative stage was completed to provide context to the survey findings and to help understand the drivers of views. This stage encompassed two main elements; discussion groups and one-on-one depth interviews. The different approaches were used to explore the views of a range of energy consumers, including those in vulnerable situations.

Discussion Groups: two 90-minute discussion groups were held in Stirling. The groups were split by socio-economic grade (SEG); 1 ABC1 group and 1 C2DE group. Each group contained a mix of genders, life-stages (pre-family. Family, empty-nesters), those with and without gas, and living in urban and rural areas.

Depth interviews with consumers experiencing vulnerabilities: four interviews were completed in total. The interviews took place in Falkirk in the participants' homes. Interviews were with consumers experiencing a range of vulnerable situations, including consumers reliant on a continuous supply of power (e.g. for health-related equipment, those living with a long-term condition or disability that severely limits their daily activity, and transient vulnerability (i.e. the nature of the vulnerability is not permanent and changes over time).

3 INTERPRETATION AND PRESENTATION OF FINDINGS

Presentation of research findings

This report presents results from both a quantitative survey and qualitative research. The survey results provide a robust, representative measure of consumer attitudes in Scotland. The findings presented in each section of this report begin with an overview of the survey findings, as these provide a representative reflection of consumer attitudes. These are then supported by findings from the qualitative strand of research to provide context and further explain the survey results.

It should be noted that confidence intervals apply to the survey findings. As the survey involved sampling a selection, rather than the whole population, of energy consumers in Scotland, confidence intervals apply to the results. These confidence intervals indicate, for a given sample size and a given survey result, the degree of confidence we can have that the survey result is real and not due to random chance from sampling a sub-section of the population.

For the total sample on which these results are based (n=1,507), there is a confidence interval of +/-2.5% (i.e. a survey result of 50% could lie between 47.5% and 52.5%).

Confidence intervals also apply when comparing results between different groups of consumers (for example comparing between different regions or between age groups). Where there are statistically significant differences in findings between subgroups (i.e. we have statistical confidence that the difference is a real difference), these are indicated. Only differences between results that are statistically significant are reported on. All measures of statistical significance have been tested at the 95% confidence level.

Qualitative research can not be considered to be representative of the wider population. Qualitative research intends to understand participants' views in greater depth and, importantly, why these views are held. This report uses the qualitative research findings for this purpose; to give greater insight on consumer attitudes measured in the survey and to understand why these views are held.

Presentation of segmented results

At the end of each section of this report, segmented results are presented. These show the difference in results for different subgroups of consumers to illustrate the main ways in which consumers differ in their awareness or experiences of energy networks and attitudes toward them.

Colour highlighting is used to indicate where a difference between results is statistically significant (i.e. a real difference and not due to random chance as a result of the survey being based on a sub-sample of all bill-payers). The key below explains how these colours should be interpreted.

A		Significantly higher (than B and C)
B		Significantly higher (than C)
C		Significantly lower

4 FINDINGS

4.1 Introduction

Section 4 describes the findings of the research. These are:

- Current levels of awareness of electricity and gas networks (3.2)
- Consumers' satisfaction with the electricity and gas network (3.3)
- Consumers' priorities for electricity and gas network investment (3.4)
- Consumer attitudes to how they use electricity now and in the future (3.5)
- Consumer attitudes towards the future of heat (3.6)
- Fairness of the electricity system (3.7)
- Support for vulnerable households (3.8)
- Findings for different subgroups (3.9)

4.2 Current Levels of Awareness of Electricity and Gas Networks

Key Findings

Current awareness of who the distribution companies are and what they do is shallow. A large majority cannot name their distributor

- Knowledge is commonly limited to a general background awareness, rather than specific knowledge of the organisations or their roles; many that are aware have become so via the more visible network activities such as network repairs and roadworks
- Many consumers are unclear on where distribution company functions stop and those of other companies in the supply chain start
- When given more information about what distribution companies do, most do not believe they understand their functions well and quickly acknowledge that the energy supply chain is more complex than first realised
- About half are aware that they pay towards distribution company activities through their bills. However, the qualitative research shows this is generally not explicitly known; rather there is an implicit expectation that energy bills will cover the cost of energy distribution. Most however, believe that this role is actually performed by suppliers

Awareness of the network companies

As a measure of awareness of the energy networks, participants were asked to name, unprompted, the gas and electric distributors in their area.

If correct 'awareness' is measured strictly by those who respond with the exact wording of the names of the distribution companies, awareness of the networks is very low:

- 1% of SSEN residents recall 'Scottish and Southern Electricity Networks' or 'SSEN'
- 3% of SPEN residents recall 'SP Energy Networks' or 'SPEN'
- 6% of all participants recall 'SGN' or 'Scotia Gas Networks'.

A higher proportion of participants give the names of predecessor organisations and/or variations on the distributor name. It is possible that participants give shorthand versions of their distributor name (although it may also involve confusing energy supplier with distributor). Others refer to the pre-privatisation name of the supplier/distributor (e.g. SSEB or Hydro Electric).

- 33% of SSEN residents name 'SSE', 'Scottish Hydro', 'Hydro/Hydro Electric' or 'SSE Hydro' as their electricity distributor
- 23% of SPEN residents name 'ScottishPower', SSEB, 'South Scotland Electricity', or 'Scottish Electricity' as their electricity distributor
- 1% of all participants name , 'Transco', 'Network Gas' or 'Transgas' as their gas distributor.

Taking all three of the above definitions of 'awareness' together, awareness of the distributors is as follows:

- 35% of SSEN residents give the name of SSEN or one of the above variations
- 26% of SPEN residents give the name of SPEN or one of the above variations
- 7% of all participants give the name of SGN or one of the above variations

Those not aware of their distributor fall into two groups; those who give the wrong name of the distributor and those who cannot give a name. Some give the name of energy retailers or of distributors in other areas:

- 7% of SSEN residents name 'SSEB', 'SGN', 'ScottishPower', 'npower', 'National Grid', 'Eon' or 'British Gas' as their electricity distributor
- 6% of SPEN residents name 'SSE Hydro', 'Scottish Hydro', 'Hydro/Hydro Electric', 'SGN', 'First Utility', 'British Gas', 'Eon', 'National Grid', 'npower' or SSE as their electricity distributor
- 24% of all participants name 'SP Energy Networks' or 'National Grid' as their gas distributor.

Most do not know the name of their distributor and do not give one:

- 56% of SSEN residents do not know the name of the electricity distributor in their area
- 66% of SPEN residents do not know the name of the electricity distributor in their area

- 66% of all participants do not know the name of their gas distributor.

In total, therefore, those not aware of their electricity and gas distributors make up a large majority of participants:

- 65% of SSEN residents are not aware of SSEN
- 74% of SPEN residents are not aware of SPEN
- 93% of all participants are not aware of SGN.

Awareness of network company functions

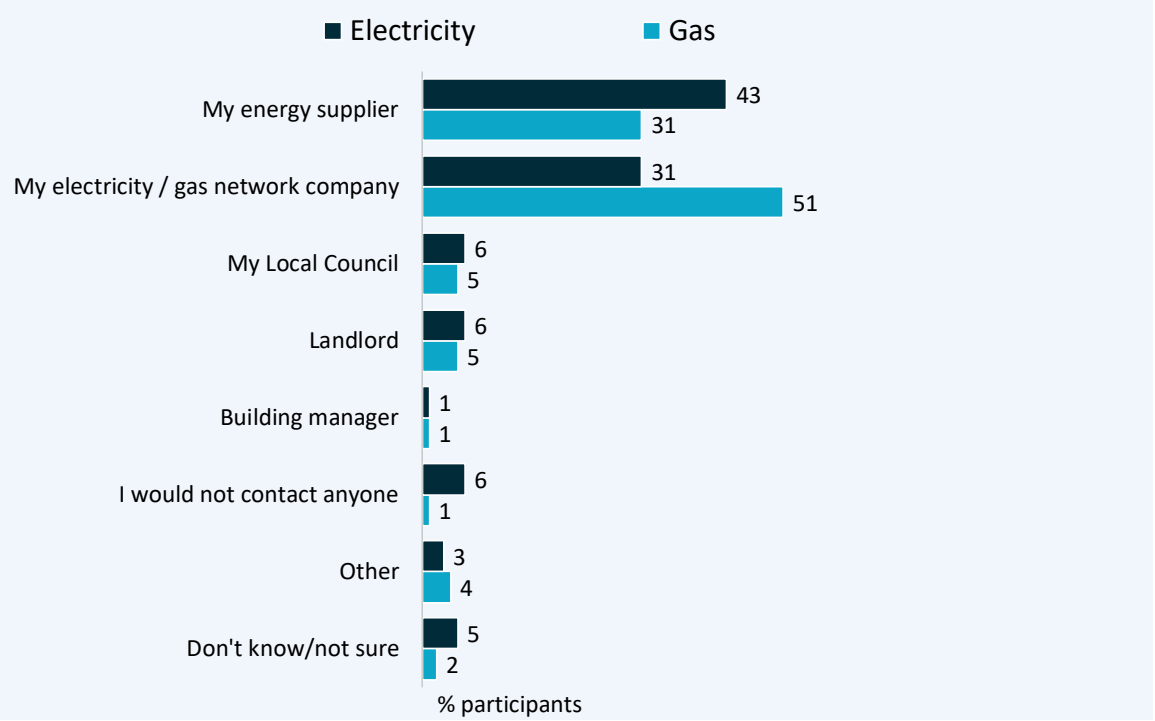
Consumers generally have low awareness of the network companies' roles. When asked who they would contact in the event of a power cut or gas supply problem, just under one in three (31%) would contact their electricity network and half (51%) would contact SGN.

Participants answered this question from a prompted list of potential contacts, so it should be noted that knowledge of this element of the networks' roles is likely to be even lower. This is supported by the qualitative research which showed that most did not know of their network company name and were unaware of their role regarding power cuts and interruptions to supplies. While those who had had prior experience of interruptions in supply knew who to contact, typically most had limited awareness and would either contact their supplier or search the internet for the best course of action.

As illustrated by Figure 4, a greater proportion of consumers would contact their energy supplier if there was a power cut than their distribution network (43% vs 31%). Almost a third (31%) would contact their energy supplier about a gas supply problem.

Other contacts include, local councils, landlords, building managers. Only a few do not know who they would contact (5% for electricity and 2% for gas).

Figure 4: If you had a power cut/problem with gas supply, who would you contact? (Q18 Q19)



Base: all participants (1,507); those with a gas supply (1,110)

Awareness of the need to contact the DNO or GDN in relation to power cuts or gas supply interruptions varies across different types of consumer. In addition to the variations set out at the end of this section, awareness is lower across the following groups:

Electricity (31% overall)

- Those offline (9%)
- No children in the household (29% vs. 38% with children)
- Women (27% vs 35% men)

Gas (51% overall)

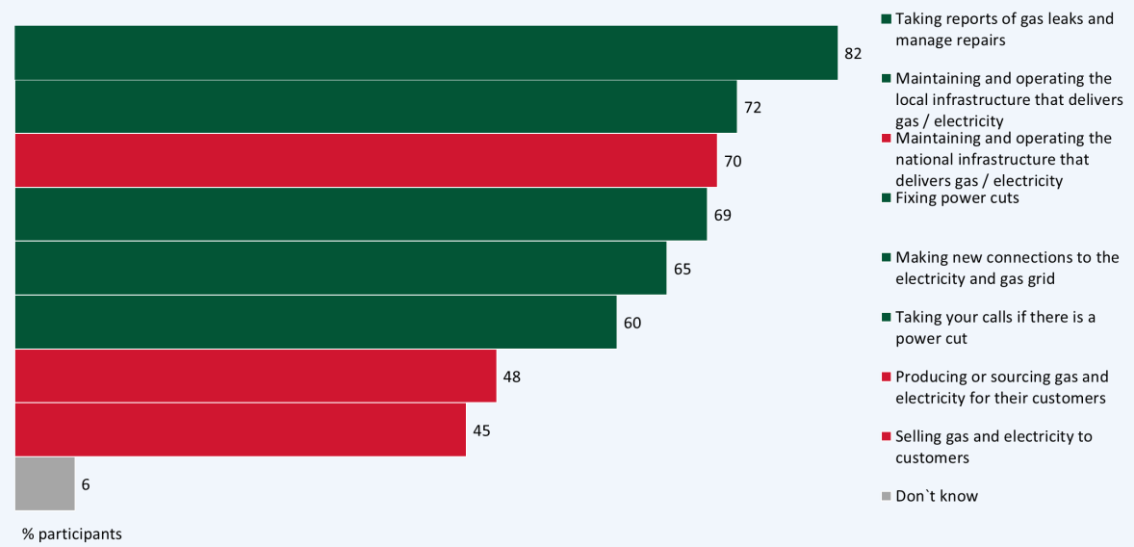
- Those offline (9%)
- No children in the household (47% vs. 64% with children)
- Those with health problems (45% vs 54% without health problems)

Awareness of the detail of the networks' roles is shallow. When presented with a list of possible roles, including areas outside of their responsibility such as generation, transmission and retail, just 28% get all functions correct (correctly selecting the relevant roles and not selecting the incorrect roles).

A large proportion of consumers attribute functions of other stages in the supply chain to the network companies (as illustrated in Figure 5, where correct responsibilities are presented in green and incorrect in red):

- 70% perceive they are responsible for the national gas and electricity infrastructure
- 48% believe they produce or source gas and electricity for customers
- 45% perceive that the networks sell gas and electricity to customers

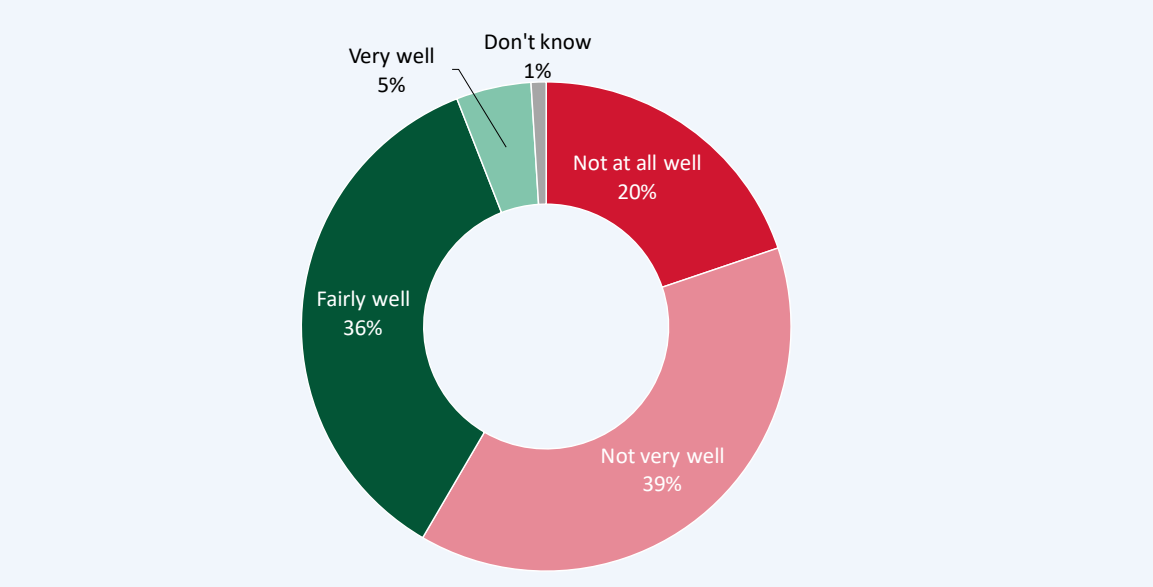
Figure 5: Which of the following do you think the gas/electricity distribution networks are responsible for? (Q20)



Base: all participants (1,507), except 'taking reports of gas leaks and manage repairs' for which it is those with a gas supply (1,109)

The shallow level of knowledge is also reinforced by self-reported levels of understanding (see Figure 6). When the functions of the distributors are explained, the majority feel that they do not understand the responsibilities of the networks well (59%). This is a much higher proportion than feel they understand the roles well (37%).

Figure 6: Before today, how well do you feel you understood what the electricity and gas distribution network companies' roles are? (Q22)



Base: all participants (1,507)

Consumers express surprise that they do not know more about the network companies given the important role they perform. They are seen as a somewhat invisible part of the system that most people know very little about.

"For me, thinking about energy networks, you think they're anonymous. You pay for the service, you get the product and there's nothing else to really think about them. They're responsible for a lot, they've got a lot of pressure for networks not to fail. You put all your trust in them."

(Discussion Group participant, ABC1)

Awareness of how consumers pay towards network company services

Under half (44%) say they are aware – when presented with the notion - that consumers pay for the electricity and gas distribution company services through their energy bills. Further qualitative exploration showed that this is generally not explicitly known, however; rather there is an implicit expectation that energy bills would cover the cost of energy distribution. Most believe that this role is actually performed by suppliers.

"I've never had any problems with the electricity coming to my house or the gas whatsoever. I think I had to have the gas cut off and it was done for half an hour and that was it and the electricity I think I've had power cuts but they've come back on in minutes. I've never had an issue with them."

(Discussion Group participant, ABC1)

"Most people would think that. They would just think it was the supplier that you were paying and not necessarily know whether it's the distribution that they're paying."

(Discussion Group participant, C2DE)

Awareness – segmentation by consumer type

Awareness of the networks and their responsibilities tends to be higher among higher social grades and older people. However, it is important to note that awareness is not particularly high among any of these groups.

A greater proportion of SPEN than SSEN residents would contact SGN if there was a problem with their gas supply. By contrast, a lower proportion of SPEN residents were able to name their electricity network compared with SSEN residents (SPEN: 26% vs SSEN :35%). This pattern is seen across different age groups, with SPEN residents consistently less able to name their DNO. Higher recall of the energy network by SSEN residents may be linked to the fact that a higher proportion recall making contact with the network.

Awareness of what the gas and electricity distributors do is lower in the SSEN area. There, only 22% named all of the distributors' functions correctly, compared with 32% in the SPEN area. It is particularly low in Highland and Island area (14%).

Table 4: Awareness by segment

Indicator	SEG			Age			Urban/Rural		DNO		Vulnerability	
	AB	C1C2	DE	16-29	30-64	65+	Urban	Rural	SPEN	SSEN	Vulnerable (including 75+)	None
Aware of who to contact about a power cut	35%	34%	23%	20%	35%	33%	29%	42%	30%	32%	32%	29%
Aware of who to contact about a gas supply problem	55%	54%	42%	43%	57%	44%	51%	48%	54%	44%	49%	53%
Named all 5 responsibilities and did not confuse network responsibilities with those of others in the supply chain	36%	28%	24%	16%	32%	32%	31%	14%	32%	22%	27%	30%
Aware that network charges are paid via energy bills	54%	46%	35%	35%	44%	54%	44%	44%	45%	44%	45%	44%
Does not understand networks' role "at all well"	17%	18%	24%	21%	21%	15%	19%	20%	19%	21%	20%	20%
Contacted electricity network	17%	16%	9%	13%	14%	16%	12%	24%	11%	20%	16%	12%
Contacted gas network	8%	9%	7%	7%	9%	8%	8%	6%	N/A	N/A	10%	5%

4.3 Consumers' Satisfaction with the Electricity and Gas Network

Key Findings

- Most consumers have not had contact with their distribution networks. If they have, it is mainly about supply interruptions, although this is not common. Many refer to the improvement in service they have seen in their lifetime, particularly in terms of a reduced frequency of power cuts.
- Furthermore, where there has been contact, satisfaction is very high. Satisfaction is also very high with reliability and overall service.
- The majority are satisfied with the value for money they receive for the service provided, but ratings are lower than for the other aspects of service. Dissatisfaction with value for money is largely due to a general sense that energy costs are too high (particularly so for lower income consumers), rather than specific network service-related issues.
- Consumers typically view the activity of the distribution networks through the lens of energy suppliers and struggle to completely separate their views of networks from experiences of their supplier.
- To allow for informed consumer input to network business planning, it is very important that any customer engagement on network-related responsibilities clearly sets out the background to the work that networks undertake. Furthermore, it is necessary to repeatedly remind consumers with this context to ensure meaningful engagement.

Contact with electricity and gas distribution networks

The vast majority of consumers have never contacted their energy network provider, with slightly more having contacted their electricity network company than gas network:

Table 5: Contact made with electricity/gas network (of those with gas/electricity connection)

Network	Made contact	Never made contact	Don't know / can't remember
Electricity	14%	80%	6%
Gas	8%	88%	4%

While there is no difference between urban and rural areas in terms of incidence of contacting network provider, there are regional differences with the highest level of contact in the Highlands and Islands where 28% report having contacted their DNO.

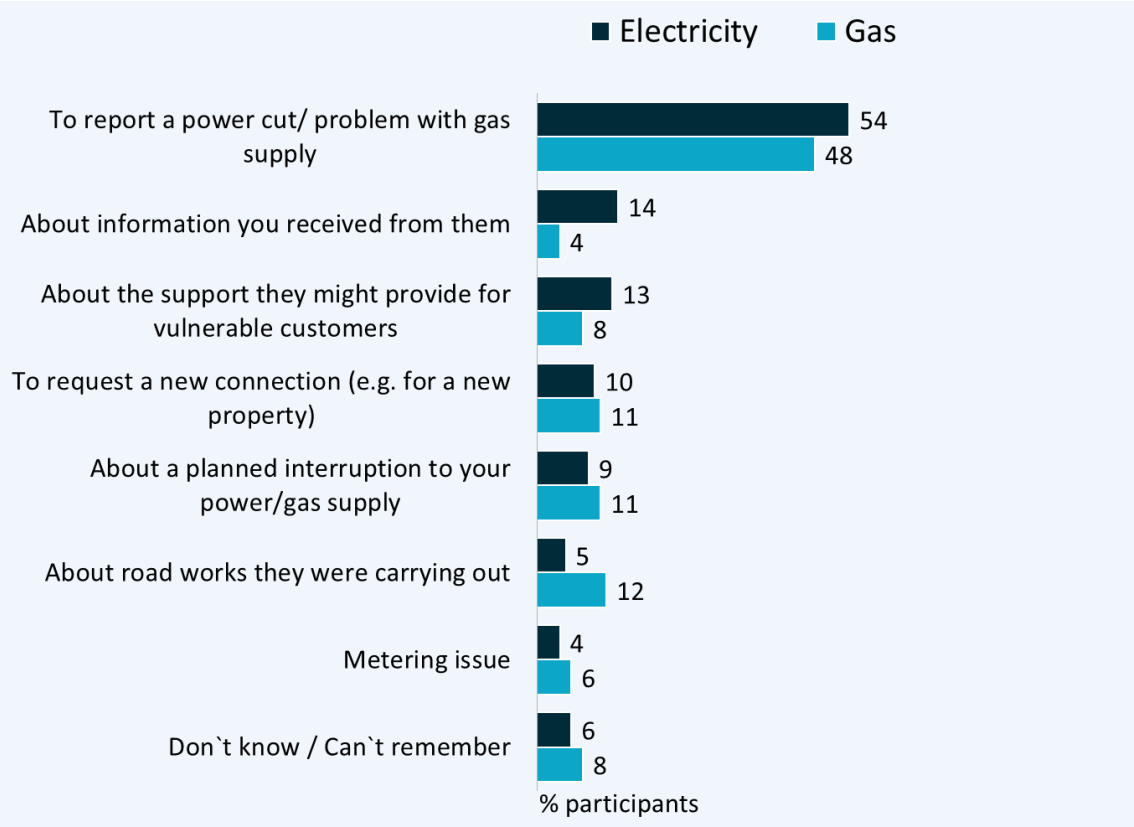
As illustrated by Figure 7, the main reason for making contact – accounting for around half of all contacts made - is about electrical power cuts or gas supply problems.

Of the 14% who have contacted their DNO, 54% did so to report a power cut (8% of all consumers). 14% made contact in relation to information received from their DNO and 13% about support provided to vulnerable customers. A lower proportion of SSEN residents made contact about electricity supply problems than SPEN customers:

- To report a power cut SPEN 62% vs SSEN 46%
- About a planned interruption: SPEN 13% vs SSEN 4%.

Of the 8% who have contacted SGN, 48% did so to report a problem with the gas supply or a gas leak (4% of all who have a mains gas supply). 12% made contact in relation to road works SGN were carrying out and 11% about a planned interruption or to request a new connection. 8% got in touch with SGN to find out about the support provided for vulnerable customers (1% of all people with a mains gas supply).

Figure 7: What did you contact your electricity / gas network about? (Q26 / Q31)



Base: those who had contacted their electricity network (216) or SGN (90)

Perceptions of the electricity and gas distribution networks

Satisfaction with the networks is high, although satisfaction with value for money of the service they provide is noticeably lower than for other attributes (service received when contact was made, reliability of supply and overall satisfaction). The levels of satisfaction are similar between the electricity and gas networks.

Satisfaction with the service received when contacting the networks

Among those who have made contact with their network, a very large majority are satisfied with the service they received from both their electricity and gas network companies. However, satisfaction is slightly higher with the response from the gas network than the electricity network.

Table 6: Satisfaction with service received when contacted electricity/gas network

Network	Satisfied	Dissatisfied
Electricity	78%	3%
Gas	84%	9%

A more detailed breakdown of satisfaction with network contact is shown in Figure 8**Error! Reference source not found.**.

Figure 8: How satisfied were you with the service you received from your electricity / gas network when you contacted them? (Q27 / Q32)

Base: those who have contacted their gas network (90) or electricity network (216)

Reliability of supply

Satisfaction with the reliability of supply is high for both gas and electricity, at around 80%. Very few consumers are dissatisfied with reliability; only 2% give a score below 5.

Table 7: Satisfaction with reliability of electricity / gas service

Network	Satisfied	Dissatisfied
Electricity	82%	2%
Gas	79%	2%

The continuity of supply is perceived to be, largely, very good. Reliability is also seen to have improved compared to the past, with power cuts becoming relatively rare.

"It [electricity reliability] has got better now so I gave it an 8 out of 10 but I remember 6 to 10 years ago, it could be out for like a full day and a night and the next morning."

(Discussion Group participant, ABC1)

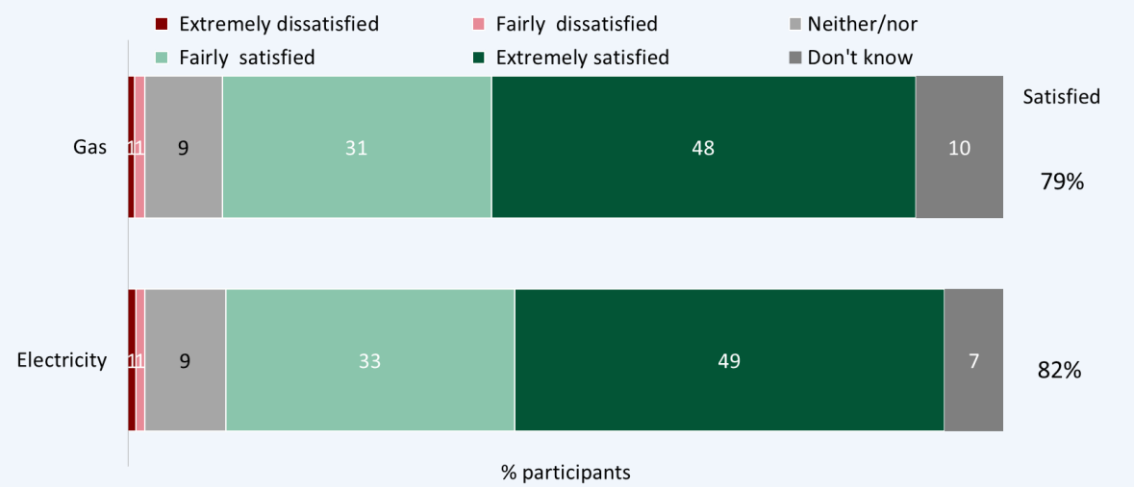
Furthermore, where interruptions in supply are experienced, they are, in the main, very short-lived and communication relating to them is viewed positively.

"They tell you they're going to cut your electricity for an hour because they're working in the street, you know your electricity is out for an hour and it's back on. They're really good."

(Discussion Group participant, ABC1)

The detailed breakdown of satisfaction ratings for reliability of supply is set out in Figure 9.

Figure 9: Based on what we have told you about the services it provides, how satisfied or dissatisfied are you with the reliability of your electricity / gas supply from your electricity / gas network? (Q28 / 33)



Base: those with a mains electricity supply (1,505) and those with a mains gas supply (1,110)

Value for money of the service provided

Satisfaction with the value for money of the service provided is below the levels recorded for other aspects of networks' service and is similar for both gas and electricity. While satisfaction is considerably lower than for reliability or customer service received, dissatisfaction remains low; just 7% are dissatisfied with electricity and 6% with gas. The lower levels of satisfaction recorded is mostly a result of a more neutral response and a

higher proportion giving a 'don't know' response, suggesting that a significant proportion of consumers do not feel able to give a response.[11]

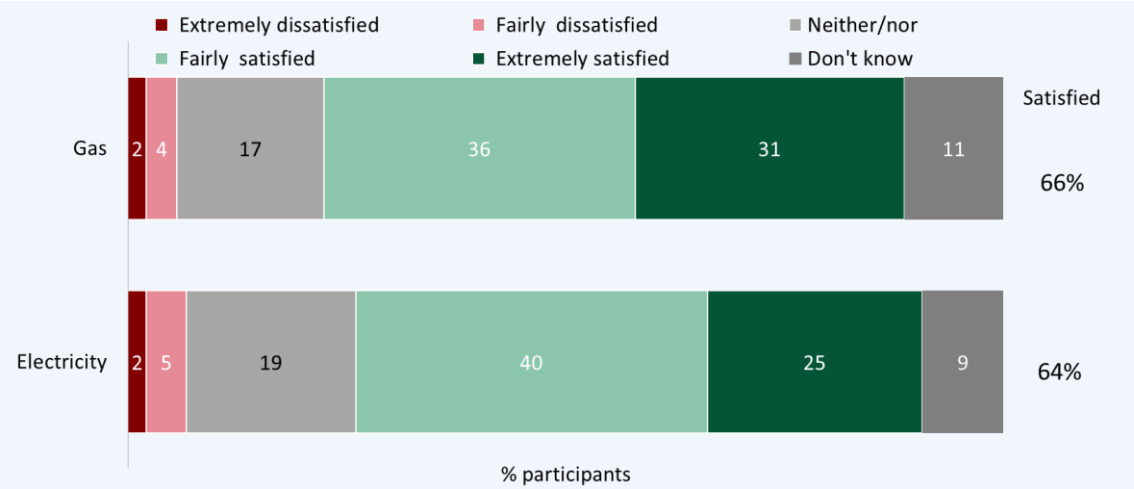
This reflects the fact that, as shown in the qualitative discussions, most have a limited understanding of what the networks do (i.e. exactly what customers get for their money) or of how much they pay their network provider.

Table 8: Satisfaction with value for money of electricity / gas service provided

Network	Satisfied	Dissatisfied
Electricity	64%	7%
Gas	66%	6%

The detailed breakdown of satisfaction with value for money is set out in Figure 10.

Figure 10: How would you rate the value for money of the service provided by your energy network? (Q28b / 33b)



Base: those with a mains electricity supply (1,505) or a mains gas supply (1,110)

The fact that a considerable majority are satisfied with the value for money they receive is because the activity they undertake is perceived as being of fundamental importance to effective energy services, as well as being delivered for a relatively small proportion of the energy bill considering the scale of the infrastructure that requires building, operating and maintaining.

"I just thought it would have been more expensive…If they don't distribute, we don't get any [energy] so why are they not getting any more money? If they don't distribute the electricity or gas then we don't get a service…it's a very small amount."

(Discussion Group participant, ABC1)

[11] Participants were asked about value for money after having been presented with information on the amount that households pay, on average, to their network company and a description of the functions that the networks are responsible for.

The qualitative discussions showed that views of value for money provided by the networks are more positive than views toward energy suppliers. However, scores are influenced by perceptions of energy suppliers and of the energy industry more widely.

> **"I've not read any bad press about any distributors whatsoever. I think it's totally separate. If you were asking me about suppliers, that would get a different score."**
>
> **(Discussion Group participant, ABC1)**

Overall satisfaction with the service received

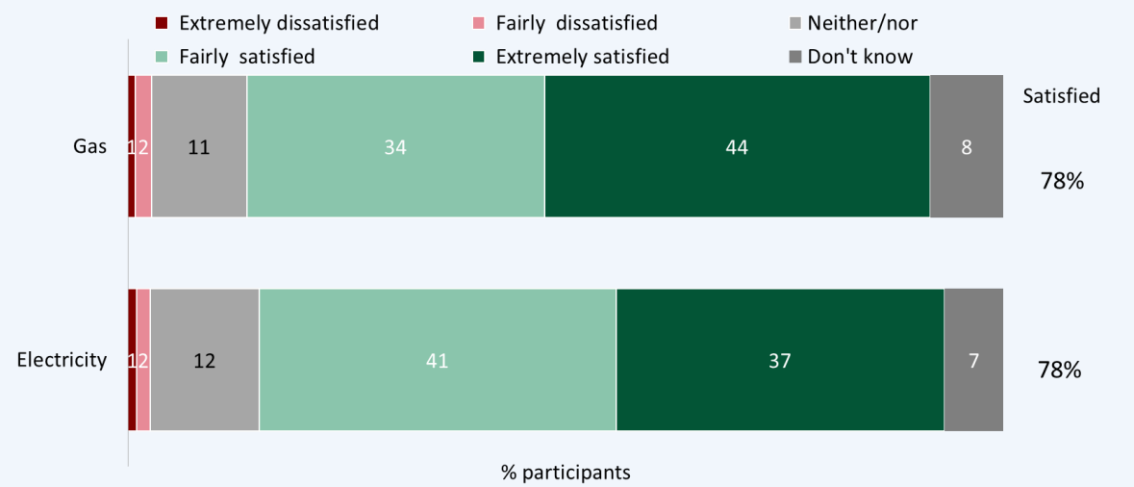
Overall satisfaction with the service provided by the networks is high, at 78% for both gas and electricity:

Table 9: Satisfaction with electricity / gas network service overall

Network	Satisfied	Dissatisfied
Electricity	78%	3%
Gas	78%	3%

The detailed breakdown of overall satisfaction with the service provided by the networks is set out in Figure 11.

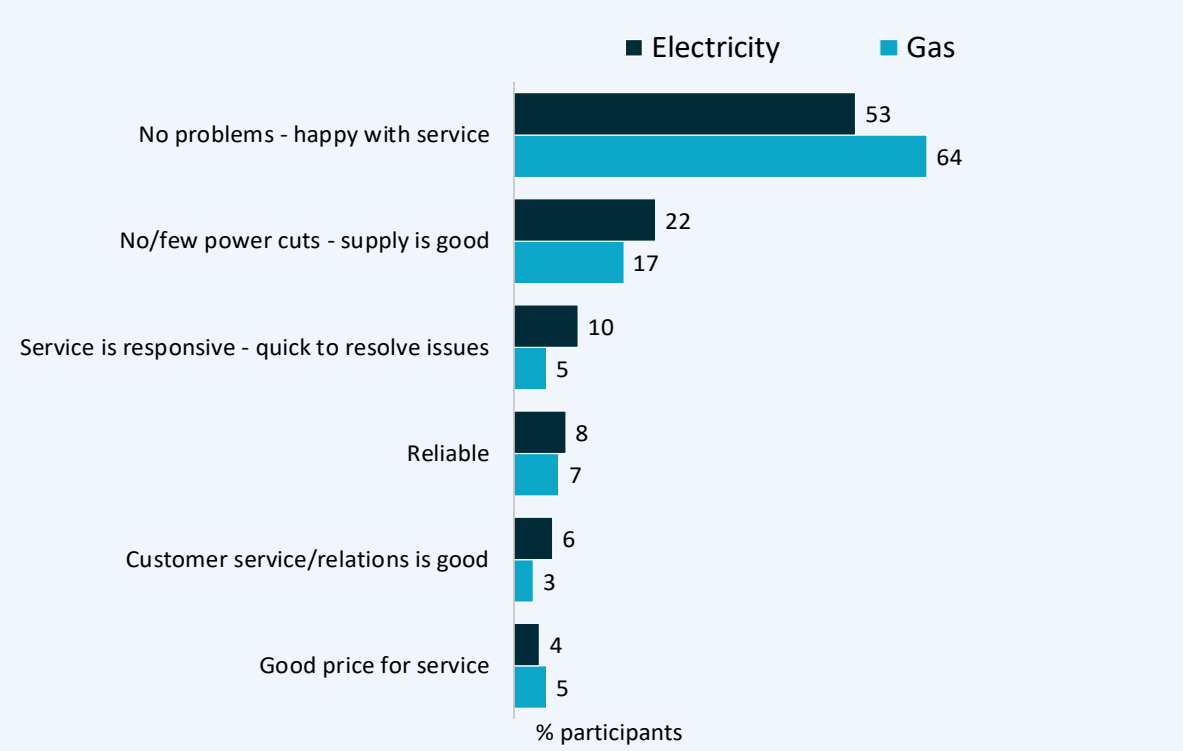
Figure 11: How satisfied are you overall with the service that you receive from your electricity / gas distribution company? (Q29 / Q34)



Base: those with a mains electricity supply (1,505) or mains gas supply (1,110)

The main reasons for being satisfied with the networks are similar for both gas and electricity. Satisfaction is mainly due to having no or few supply problems as Figure 12 shows.

Figure 12: Reasons for being satisfied with the gas and electricity distributors (Q29a and Q34a)



Bases: those satisfied with their electricity distributor (1,169); those satisfied with their gas distributor (864)

Among the small minority who are dissatisfied with their distributor, the main reasons centred on the themes of cost and service (see Table 10[12]). As noted earlier, the qualitative phase revealed that dissatisfaction with value for money was often driven by general negativity to energy providers generally, rather than the network companies specifically.

Table 10: Reasons for being dissatisfied with gas and electricity distributors (Q29a and Q34a)

Theme	Reason for dissatisfaction	Electricity (number of mentions)	Gas (number of mentions)
Cost	The cost should be lower	9	10
	% of energy bill going to distributor is too high	2	3
	Focus is on profit	1	2
Service	Customer service/relations should be improved	6	2
	Service should be more responsive	5	2
	Unhappy with service provided	3	4
	No or little contact	1	0
	Communications problems	1	2
Supply	Problems with supply	7	1
Awareness	Didn't know about the distributor	5	1
	Base	**39**	**29**

[12] As the number of participants who are dissatisfied is very small, the data shown is for the number of participants dissatisfied with each aspect of their distributor, not the percentage.

Satisfaction – segmentation by consumer type

Satisfaction with the networks tends to be higher among higher social grades and increases with age. There are no differences by urban/rural status, DNO or vulnerability.

Table 11: Satisfaction by segment

Indicator	SEG			Age		
	AB	C1C2	DE	16-29	30-64	65+
Satisfaction with electricity network overall	84%	78%	72%	65%	78%	90%
Satisfied with electricity network value for money	71%	65%	58%	57%	64%	72%
Satisfied with reliability of electricity supply	87%	82%	77%	72%	82%	91%
Satisfaction with gas network overall	82%	81%	69%	66%	79%	87%
Satisfied with gas network value for money	71%	69%	58%	55%	66%	77%
Satisfied with reliability of gas supply	85%	79%	75%	65%	81%	89%

It should be noted that, although lower social grades are less satisfied with the overall service they receive, this is due to a more neutral stance and inability, or reluctance, to provide a strong opinion either way. Social grade DE are no more likely to be dissatisfied but are more inclined to give a neither/nor or don't know response.

An element of service that lower social grades *are* more dissatisfied with is the value for money they receive from their network (e.g. 9% C2DEs vs 6% C1C2s and 4% ABs for electricity services). The findings of the qualitative phase indicated that this is driven by concerns around affordability and the ability to pay for energy bills overall. The network element of the bill was generally seen in the discussion groups as a relatively small element of the total bill, considering the perceived importance of the role the networks undertake and the costs that must be incurred in delivering that scale of infrastructure. However, in the current climate of uncertainty regarding Brexit and perceived high energy bills, participants – particularly those on lower incomes – felt that all measures should be taken to keep bills (and all elements of the energy bill) affordable.

4.4 Consumers' Priorities for Electricity and Gas Network Investment

Key Findings

- Consumers' highest priorities are to have an affordable, safe and reliable service – both for gas and for electricity.
- Customer satisfaction and innovation are seen as lower priorities but still important for the networks to focus on.
- Priorities are similar for gas and electricity.
- Customer prioritisation is most divided by age and SEG

Priorities for investment

Participants were asked to give their priorities for investment in the energy network, having first been given contextual information about how the energy network is changing. More details of the context are shown in the questionnaire in Appendix B:

A 'bag of money' exercise was used to prioritise investment across a number of service areas, including safety, reliability, affordability, environmental impact, protecting vulnerable customers, customer satisfaction and innovation. Participants were asked to imagine that they were in charge of their distribution network company and to decide which areas to prioritise in the next business plan.

Participants allocated 10 tokens across as many or as few investment areas as they wished. All tokens needed to be used. The average (mean) allocation of tokens to each area ranged from 1.02 to 1.98 for electricity and 1.02 to 1.96 for gas.

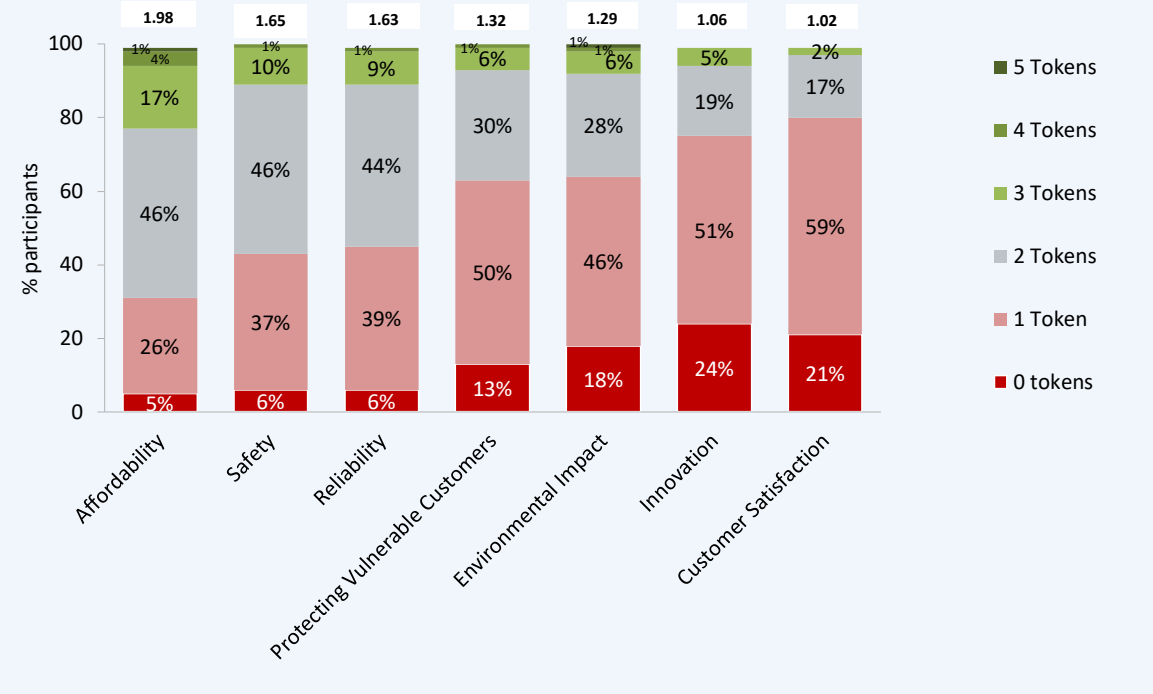
The exercise revealed that consumers prioritise in very similar ways between electricity and gas, with the same order of prioritisation for each and a remarkably similar distribution of tokens. The top priority is affordability, followed by safety and reliability, both close together. Further down but also close together are protecting vulnerable customers and environmental impacts. The lowest priority is innovation and customer satisfaction, again ranked closely together.

The results indicate that all of these elements are considered important; a relatively small proportion ignore any one area from their prioritisation. Around one in four do not allocate any of the 'budget' to innovation and around one in five do not do so for customer satisfaction. Customer satisfaction receives, on average, half the level of prioritisation that affordability does.

The only slight difference in how investment is prioritised between electricity and gas is that safety is given slightly higher priority for gas than electricity; 65% of participants allocate at least 2 of the 10 tokens to safety for gas, whereas 57% do so for electricity.

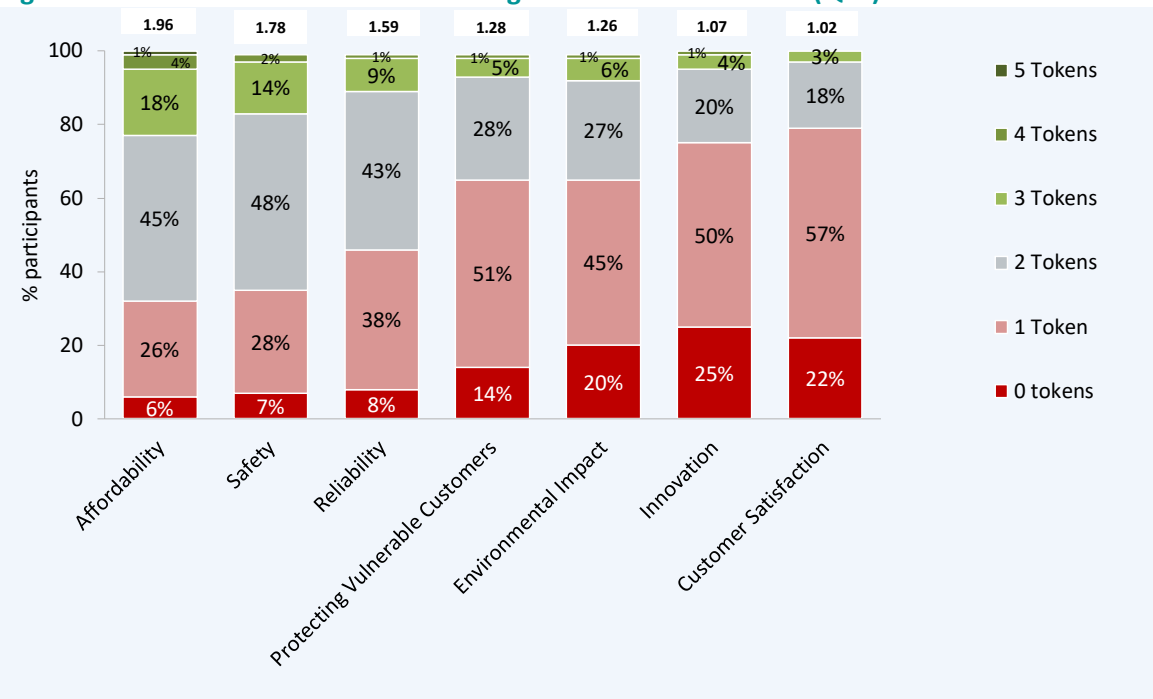
The full results of the bag of money exercise is shown in Figure 13 for the electricity networks and in Figure 14 for the gas distribution networks.

Figure 13: Priorities for investment in the electricity distribution network (Q35)



Base: those with a mains electricity supply (1,500)

Figure 14: Priorities for investment in the gas distribution network (Q37)



Base: those with a mains gas supply (1,106)

Affordability, safety and resilience are viewed as core parts of the services provided by networks and therefore are prioritised. Affordability is deemed important due to the fact that energy is a necessity – being able to stay warm, cook and use modern appliances is seen as a basic human right.

The qualitative exploration confirmed that lower priority given to customer satisfaction is driven by two things; the fact that the majority have not had prior contact with their network and, related to this, that for many, customer satisfaction is seen as predominantly being a supplier responsibility. Some perceive energy suppliers as being the direct customers for networks, rather than the end consumer. The very limited experience of direct customer service issues by most consumers means they largely discount this issue from their mental prioritisation.

"I didn't tick customer satisfaction and I didn't tick protect vulnerable customers…The reason I didn't do that is I don't think it's their job. They know the customers. The person that should be protecting the vulnerable customers and customer satisfaction is the supplier."

(Discussion Group participant, ABC1)

Innovation also receives relatively less priority than other service areas. The qualitative discussions suggest that this is because consumers find it hard to envisage the transition that the energy system needs to undergo, or the network changes that are required to deliver it. Furthermore, some question if this should be something that customers pay higher bills to deliver, with innovation being seen as an internal company initiative that all companies do to grow and increase profits. However, it should be noted that younger consumers are more inclined to allocate priority to this area, suggesting younger generations are increasingly attuned to the need for change.

As noted later in this section, there is a split between social grade in terms of the levels of priority given to improving environmental performance and to protecting vulnerable customers. Consumers of a lower social grade are less likely to devote investment to improving environmental performance than higher social grades. Explored qualitatively this initiative is seen, to a degree, by those on a lower income as a 'nice to have' that falls behind more pressing concerns. Instead, lower social grades are more likely to support greater investment in protecting the needs of vulnerable customers. Improving environmental performance of the networks is seen as an important activity, but many consumers are more willing to see their bills go toward the 'core' elements of the service like safety and reliability, or if it means vulnerable customers are protected.

One group of customers particularly in favour of networks protecting the environment are those of a younger age. The priority given to this increases as age declines.

Most participants do not think there are any missing priorities from the list of investment areas (95% for the electricity networks and 96% for the gas networks). Among the minority who do think there are other areas to focus on, most give variations of the topics covered in the seven investment areas. There are a small number of suggestions for

additional areas and these are similar for gas and electricity, as illustrated by Table 12. The figures given below refer to the number of participants making each suggestion:

Table 12: Other proposed areas for investment

Proposed investment area	Electricity	Gas
Efficiency, financial viability, reducing overheads	6	3
Renewable energy	5	2
Nationalisation	4	1
Educating consumers to use less energy	4	2
Reducing profit/shareholder dividends	3	2
Provision of information	3	2
Staff training	1	1

Prioritisation – segmentation by consumer type

The way that consumers prioritise network investment is mostly along lines of social grade and age.

Older consumers place a higher priority on affordability. Younger consumers on the other hand place a high degree of priority on environmental performance of the networks and are also more inclined to support innovation.

Lower social grades are more likely to place emphasis on affordability and protecting the vulnerable but are less likely than higher social grades to support focus on environmental impact and innovation.

As might be expected, customers with a vulnerability (themselves or a household member) place greater priority on efforts to protect the vulnerable.

Consumers living in urban areas give a higher priority to safety. The only difference between DNO areas is that SSEN customers give a higher priority to reliability of gas supplies.

Table 13: Prioritisation by segment

Indicator	SEG			Age			Urban/Rural		DNO		Vulnerability	
	AB	C1C2	DE	16-29	30-64	65+	Urban	Rural	SPEN	SSEN	Vulnerable (including 75+)	None
Electricity network **safety** (average tokens allocated)	1.6	1.63	1.67	1.69	1.61	1.7	1.67	1.52	1.67	1.6	1.64	1.63
Electricity network **reliability** (average tokens allocated)	1.8	1.63	1.54	1.35	1.67	1.8	1.61	1.72	1.59	1.68	1.59	1.67
Electricity network **affordability** (average tokens allocated)	1.9	1.91	2.21	1.71	2.03	2.15	1.99	1.94	1.96	2.04	2.03	1.9
Electricity network **environmental impact** (average tokens allocated)	1.4	1.34	1.12	1.57	1.28	1.03	1.29	1.27	1.3	1.26	1.24	1.4
Protecting vulnerable electricity customers (average tokens allocated)	1.2	1.27	1.5	1.29	1.29	1.4	1.31	1.37	1.3	1.35	1.38	1.2
Customer Satisfaction (average tokens allocated)	0.9	1.06	0.99	1.09	0.99	1.02	1.03	0.97	1.02	1.0	1.03	1.03
Electricity network **innovation** (average tokens allocated)	1.1	1.1	0.97	1.24	1.06	0.9	1.06	1.05	1.08	1.03	1.03	1.11
Gas network **safety** (average tokens allocated)	1.7	1.83	1.71	1.77	1.74	1.9	1.78	1.78	1.8	1.73	1.77	1.75
Gas network **reliability** (average tokens allocated)	1.7	1.6	1.53	1.41	1.62	1.72	1.59	1.64	1.55	1.69	1.58	1.6
Gas network **affordability** (average tokens allocated)	2	1.86	2.13	1.67	2.01	2.13	1.96	1.97	1.96	1.97	2.03	1.86
Gas network **environmental impact** (average tokens allocated)	1.3	1.31	1.14	1.57	1.24	1.0	1.27	1.14	1.27	1.24	1.2	1.41
Protecting vulnerable gas customers (average tokens allocated)	1.2	1.21	1.5	1.25	1.27	1.33	1.28	1.24	1.27	1.28	1.32	1.21
Gas network **customer satisfaction** (average tokens allocated)	0.99	1.03	1.03	1.14	0.99	0.99	1.02	1.05	1.03	1.01	1.04	1.01
Gas network **innovation** (average tokens allocated)	1.1	1.11	0.96	1.18	1.08	0.93	1.06	1.17	1.08	1.04	1.03	1.14

4.5 Consumer Attitudes to How Electricity is Used Now and in the Future

Key Findings

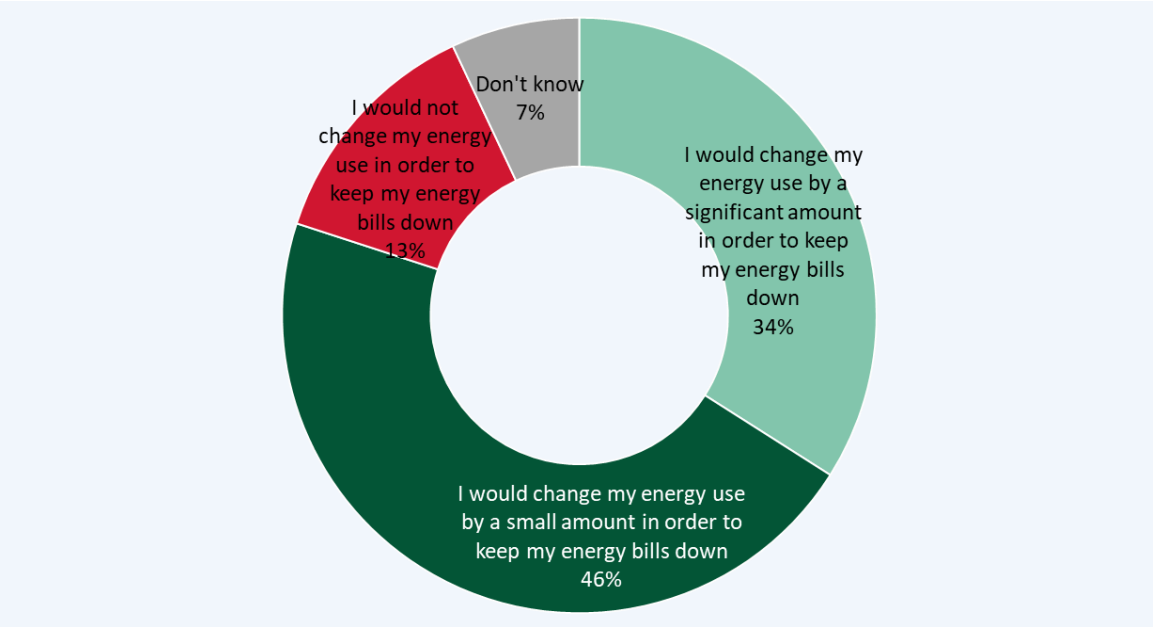
- A large majority would prefer to change how they use energy in order to keep their energy bills down. However, they also highlight several practical barriers to realising this change.
- Most find a time of use tariff appealing and a large minority found other energy saving products attractive. However, cost is considered the main barrier to adoption.
- However, the degree to which consumers are willing to change their behaviour is arguable. Most would only envisage changing their behaviour a small amount and two key barriers are seen to prevent adoption of things like time of use tariffs or technology to support this; cost and practical barriers (such as '9-5' working hours).
- Some express concern that greater network flexibility may penalise hard working people who are less able to adjust their behaviour to ensure they benefit.

Willingness to change energy behaviour

Most consumers (80%) report being willing to change their energy use in order to keep their energy bills down in the face of rising costs. One in three (34%) would be willing to change their behaviour by a significant amount, just under half (46%) by a small amount. About one in eight (13%) would not change their energy use at all (see Figure 15).[13]

[13] The question did not present an example bill reduction level.

Figure 15: Willingness to change behaviour to reduce energy costs (Q39)



Base: All participants (1,507)

The qualitative research revealed that this relatively high proportion being willing to change their behaviour should be considered in the context that most are not envisaging significant change to their lifestyles. Most see this as a case of adjusting what they already do rather than more significant behavioural change.

Of the 13% who would not change their use of energy to keep their bills down, half would be willing to pay more to continue to use energy when and how they want to (i.e. 7% of all participants).

Attitudes towards new ways of using energy

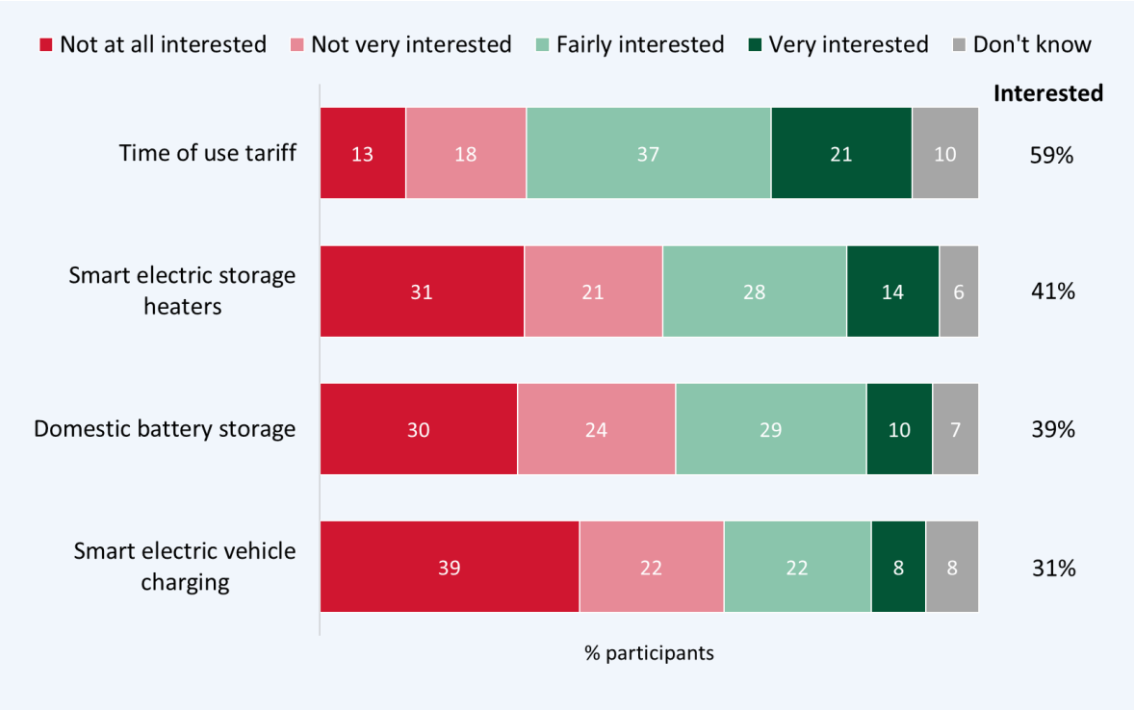
Once presented with information about them, a majority of consumers would be interested in time of use tariffs and a sizeable minority are interested in new energy saving technologies. The information presented to participants for each technology is shown in Table 14.

Those who are fairly or very interested in new ways of using energy:

- 59% Time of use tariffs
- 41% Smart electric storage heaters
- 39% Domestic battery storage
- 31% Smart electric vehicle charging.

The detailed breakdown of the findings is shown in Figure 16.

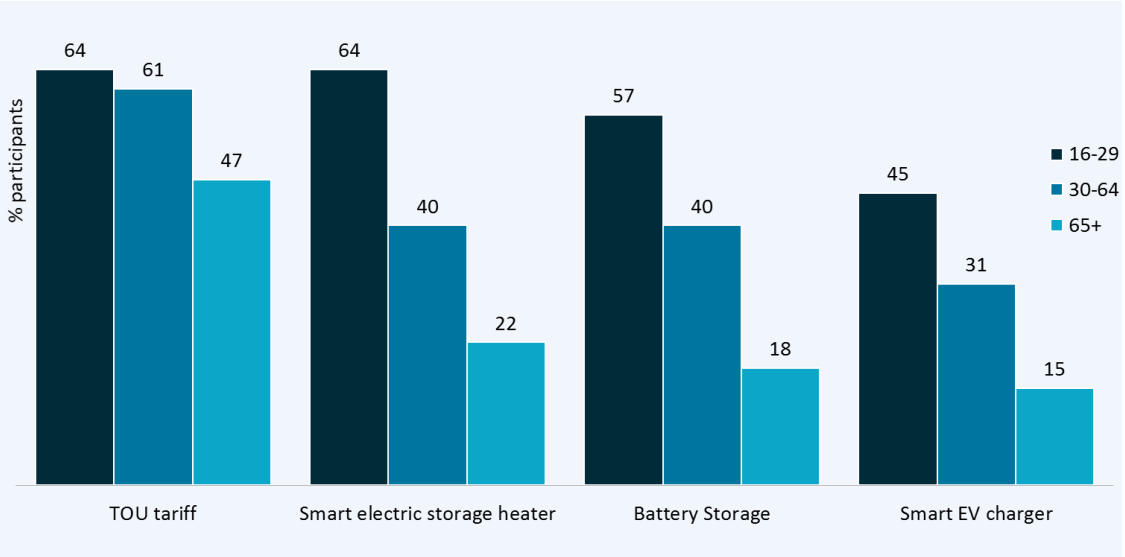
Figure 16: Interest in new ways of using energy (Q41, Q42)



Base: all participants (1,507)

As shown in Figure 17, interest in these technologies declines with age, with the largest variations seen for storage heaters, battery storage and smart EV chargers. Interest in time of use tariffs is relatively high across age groups.

Figure 17: Interest in new ways of using energy, by age (Q41, Q42)



Base: all participants (1,507)

Interest also varies depending on the ways in which people already engage with energy:

- Those who already have a smart meter are more interested in time of use tariffs than those who do not (67% vs 55%).
- Those with electric central heating are most interested in smart electric storage heaters (75%)

- Those who own an electric vehicle or any form of renewable energy generation find several of the technologies more appealing, including battery storage (60%), EV charger (52%) and smart electric storage heaters (53%).

Table 14: Descriptions provided for each technology.

Technology	Description	
Time of use tariffs	Smart meters are being rolled out across Scotland. Smart meters send your energy supplier meter readings automatically and also have a display device which shows you how much energy you are using in near real time. The roll out of smart meters means there is now a wider choice of different energy tariffs available to consumers. One type of tariff is a 'time of use tariff' where you can get lower energy prices if you use more of your electricity at off-peak times and less at peak times. For example, this might mean trying to use more energy intensive appliances less frequently in the evening and instead using them more often at night or during the day.	[NO IMAGE PRESENTED]
Smart electric storage heaters	Smart electric storage heaters store thermal energy during the night and use this to heat your home during the day. Storage heaters are primarily designed for customers on a time-of-use electricity tariff. Using a storage heater allows customers on these tariffs to use cheaper off-peak electricity to heat their home during the day. Example cost: £250 - £800	
Domestic battery storage	These are domestic forms of battery storage that allow you to store energy from things like solar panels or electric vehicles, to then use the power at a time that you need, reducing your need to buy energy. They tend to be a box about the size of a standard boiler. Example cost: £2,500 - £6,000	
Smart electric vehicle charging	These are chargers that will charge your electric vehicle battery from the grid when electricity is in low demand and is therefore cheaper. Example cost: £700 - £1,500 (there is also currently a grant allowing you to reduce the cost above by £500)	

Time of use tariffs

There is a high degree of interest in time of use tariffs. Consumers find them attractive as a way to help reduce the cost of energy and give greater control over their energy bills. However, consumers also question how able many households would be to take advantage of them.

"It would be alright for people who maybe work funny shifts but the majority of people are up in the morning, out to work, back in for dinner and in at night so it wouldn't work for them because that's their normal pattern, but it might work for other people."

(Discussion Group participant, C2DE)

Discussion group participants felt it was good to have the choice and ability to use these tariffs. However, they also held concerns that they also risked punishing hard-working people least able to adapt their routines sufficiently to benefit from lower-rate tariff periods.

"Working families with 3 or 4 more children tend to be punished most at the moment in the economy. Some families can't actually feed everyone…and they're being punished the most, they'll be paying the most…I totally get that, it makes perfect sense but we would be penalising families that can't afford to be penalised."

(Discussion Group participant, ABC1)

Some also raise more practical concerns over safety and potential anti-social impacts. Concerns centred around the use of appliances when people are either out or asleep and the increased use of noisy appliances late at night.

Battery storage, smart electric storage heaters and smart EV chargers

Battery storage and smart electric storage heaters are the most popular of the technologies presented. All three technologies are perceived as very good ideas, however smart EV chargers are seen to be more out of reach given the high cost of affording an electric vehicle. For most participants, electric vehicles were seen as something for the future and not something they could imagine themselves having particularly soon.

Battery storage is regarded as a very interesting concept. Many like the idea of being able to store their energy in this way, and envisage it being beneficial for those already owning generation technology as well as consumers particularly vulnerable to power cuts.

"You'd put electricity into that and you'd let it sit there until you needed to use it so if there was a massive power cut, if you were a vulnerable customer who had a breathalyser, you've always got a back-up."

(Discussion Group participant, ABC1)

Smart electric storage heaters were considered interesting as a concept for those with electric heating but came with negative associations with non-smart storage heaters. The latter are recalled as an expensive way to heat a home and therefore not something the majority would choose.

The most significant barrier to adopting these forms of technology, particularly for those on lower incomes, is the up-font cost. This is considered too high a cost when it is difficult to predict with any accuracy the pay-back time.

> **"I think the innovations are great, I do, I think it's a great idea but personally we couldn't afford that, that price range but I think it's a fantastic idea, I do but it's just the cost is too high for us personally."**
>
> **(Discussion Group participant, C2DE)**

Attitudes to energy use and new technology – segmentation by consumer type

Interest in new technologies that enable greater engagement with energy networks tends to be higher among higher social grades (except for smart electric storage heaters) and younger people.

There are some variations by DNO; SSEN residents are less interested in smart electric vehicle charging, but this still represents a reasonable level of interest (26%).

There are no differences by urban/rural status.

Table 15: Energy use / technology by segment

Indicator	SEG			Age			DNO		Vulnerability	
	AB	C1C2	DE	16-29	30-64	65+	SPEN	SSEN	Vulnerable (including 75+)	None
Would change energy use a significant amount to keep energy bills down	29%	35%	34%	35%	36%	25%	34%	33%	34%	34%
Interested in time of use tariffs	63%	60%	52%	64%	61%	47%	60%	57%	58%	61%
Interested in smart electric storage heaters	37%	43%	42%	64%	40%	22%	41%	41%	41%	44%
Interested in domestic batter storage	40%	41%	34%	57%	40%	18%	40%	38%	38%	43%
Interested in smart electric vehicle charging	39%	33%	21%	45%	31%	15%	33%	26%	28%	39%

4.6 Support for Vulnerable Households

Key Findings

- A large majority are concerned that lower income households may not be able to engage with technologies that can reduce energy bills.
- This is viewed as a concern because these groups are perceived to be most in need of a reduction in bills but least able to benefit from technologies that enable them to do so.
- A large majority also believe that the distribution companies should assist lower income household to adapt to the ways in which they can engage with the energy network. This is seen to be mutually beneficial to the network companies as well as the customer.
- A sizeable majority support measures to help lower income households engage with changes to the energy network. This is despite the fact that the cost might be spread across all customers.

Support for vulnerable customers

There is a high level of concern, as shown in Figure 18, that lower income households might not be able to take advantage of technology that helps them reduce their energy bills; 79% agree it is a concern, while just 5% disagree.

As already noted, many examples were given in the qualitative discussions of how many people currently struggle to afford energy. The potential increase of time of use tariffs therefore causes concern that these consumers might be further disadvantaged. Elderly and low income customers are seen as the most in need of support to get their bills down but least able to benefit from these technologies.

The quantitative and qualitative findings shows there is a high level of support (see Figure 19) for the energy networks helping lower income households adapt to the ways in which they can engage with the energy network, with 80% agreeing that energy networks should help and just 3% disagreeing.

Figure 18: Do you agree or disagree that you are concerned that households on lower incomes might not be able to take advantage of technology that helps them reduce their energy bills (Q44b)

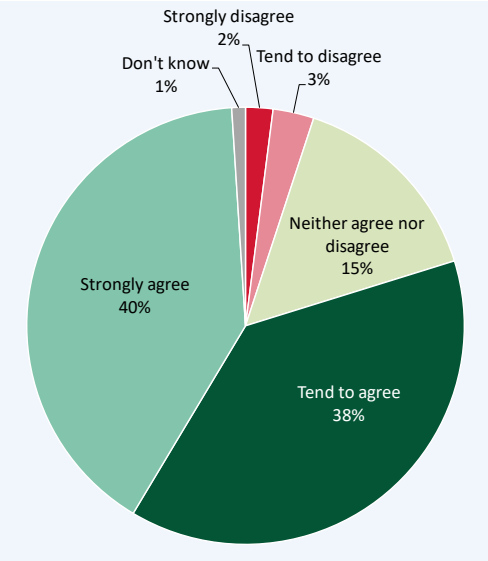
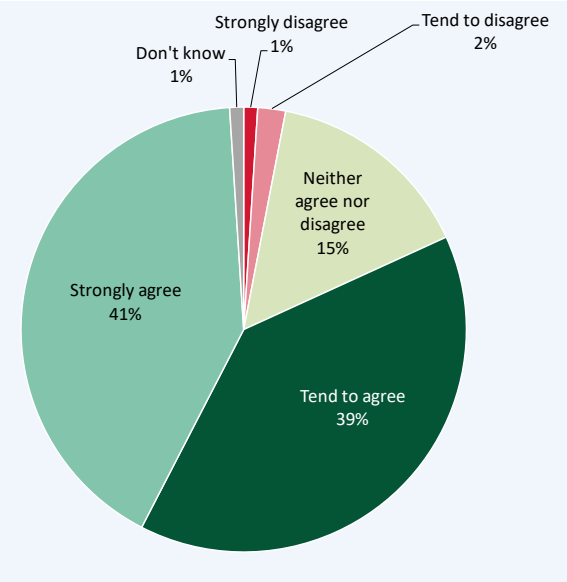


Figure 19: Do you agree or disagree that the electricity and gas distribution companies should help households on lower incomes to adapt to the ways in which they can engage with the energy network (e.g. through new technology or using cheaper tariffs)? (Q44a)



Base: all participants (1,507)

The networks are seen as duty-bound to provide some level of support because the development, and adoption, of these forms of technology is seen as being beneficial to the network companies themselves (i.e. allowing them to manage their resources more efficiently).

There was also support expressed in the qualitative discussion for spreading the cost of this across customers. There was not a consensus on whether this would be better financed through increases in energy bills or general taxation. Some feared that paying for it via taxation would result in the funds being subsumed by other government initiatives and not lead to the intended impact.

"I'd be happy if a percentage of my taxes went towards this or a percentage of my bill from energy went towards it as well in the same way like you mentioned TV licences. I'm pretty sure people that pay for TV licences cover the elderly advantaged, I think."

(Discussion Group participant, C2DE)

"For the likes of that, if it was like the elderly, the disabled and things like that who could really use it, I wouldn't mind paying an extra couple of pounds a month."

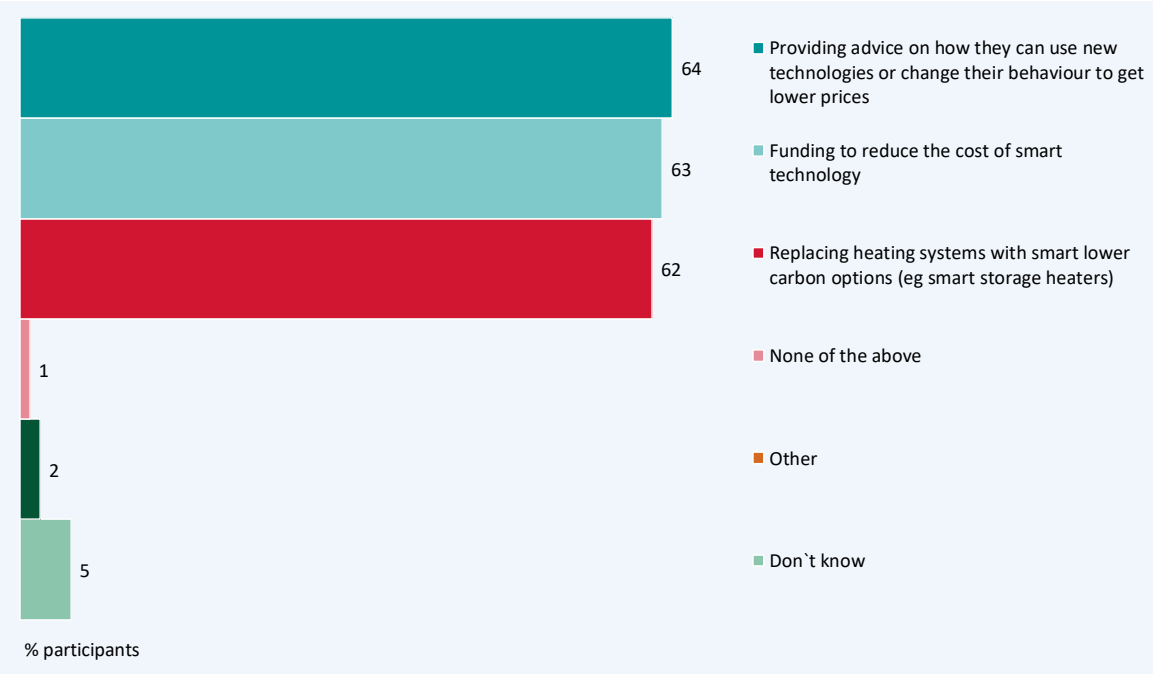
(Discussion Group participant, ABC1)

Among those who agree that the distribution companies should help lower income households, there is sizeable and similar levels of support for three potential ways that the companies could provide support:

- 62% support replacing heating systems with smart lower carbon options (e.g. smart storage heaters)
- 64% support providing advice on how to use new technologies or change behaviour to get lower prices
- 63% support providing funding to reduce the cost of smart technology

This amounts to around half of all participants indicating support for these initiatives.

Figure 18: In which of the following ways do you think the electricity and gas distribution companies should provide this support to lower income households? The cost of any initiatives that the network companies put in place for lower income households would be spread across all customers (Q45)



Base: those who agreed that the electricity and gas distribution companies should help households on lower incomes to adapt to the ways in which they can engage with the energy network (1,209)

Support for vulnerable customers – segmentation by consumer type

While a majority of consumers are concerned that lower income households may struggle to use technology to reduce their energy bills, this view is even stronger among lower social grades and customers experiencing some form of vulnerability. Over eight in ten of each group are concerned and believe the energy networks should help lower income customers in this respect.

There are no differences by age, DNO or urban/rural status.

Table 16: Vulnerability support by segment

Indicator	SEG			Vulnerability	
	AB	C1C2	DE	Vulnerable (including 75+)	None
Agree are concerned lower income households might not be able to take advantage of technology	71%	77%	87%	81%	73%
Agree that the gas and electricity distribution companies should help lower income households	71%	79%	89%	84%	74%

4.7 Consumer Attitudes Towards the Future of Heat

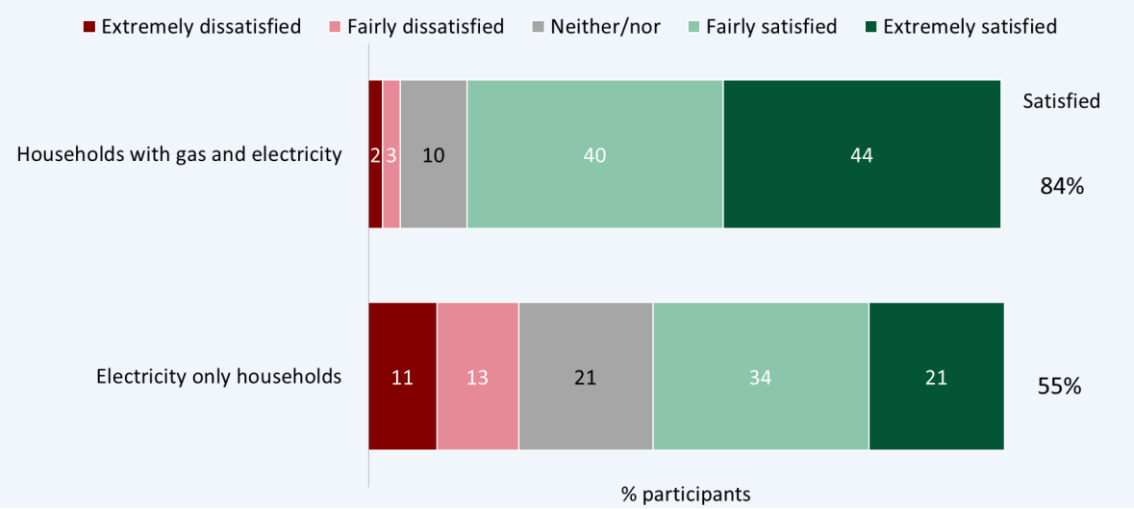
Key Findings

- Households with gas and electricity are much more satisfied with their heating system than those living in households who only have electricity
- The majority of those who only have electricity would prefer to change to gas central heating if they had the opportunity
- This suggest that efforts to decarbonise domestic heating would need to overcome a distinct preference for gas-based heating

Current heating systems and willingness to change

There is a distinct difference in satisfaction with current heating systems between households who only have a mains electricity supply and households that have both gas and electricity. Almost 1 in 4 electricity-only households (24%) are dissatisfied with their heating systems, compared with 5% of households with both gas and electricity (see Figure 19).

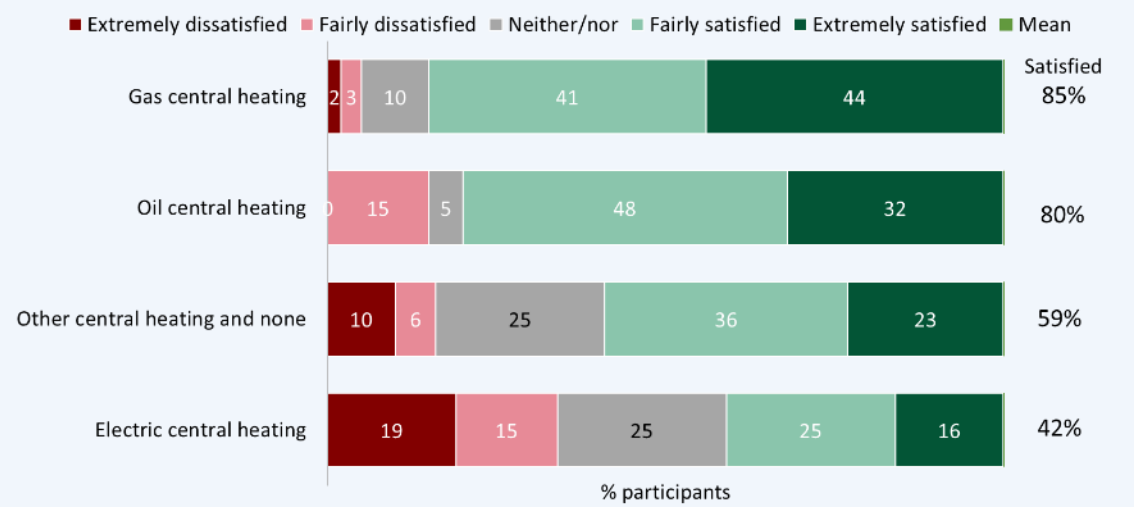
Figure 19: To what extent are you satisfied or dissatisfied with your current heating system? (Q16)



Base: Electricity only households (397), households with gas and electricity (1,107)

There is a marked divide in tenure; satisfaction drops from 83% among owner-occupiers to 73% of people in social housing and 57% of those privately renting. Satisfaction is lowest among those with electric central heating; fewer than half are satisfied with their heating system (42%) and 33% are dissatisfied (see Figure 20).

Figure 20: To what extent are you satisfied or dissatisfied with your current heating system? – By heating type (Q16)



Base: Gas central heating (1,081), oil central heating (85), other (155), electric heating (195)

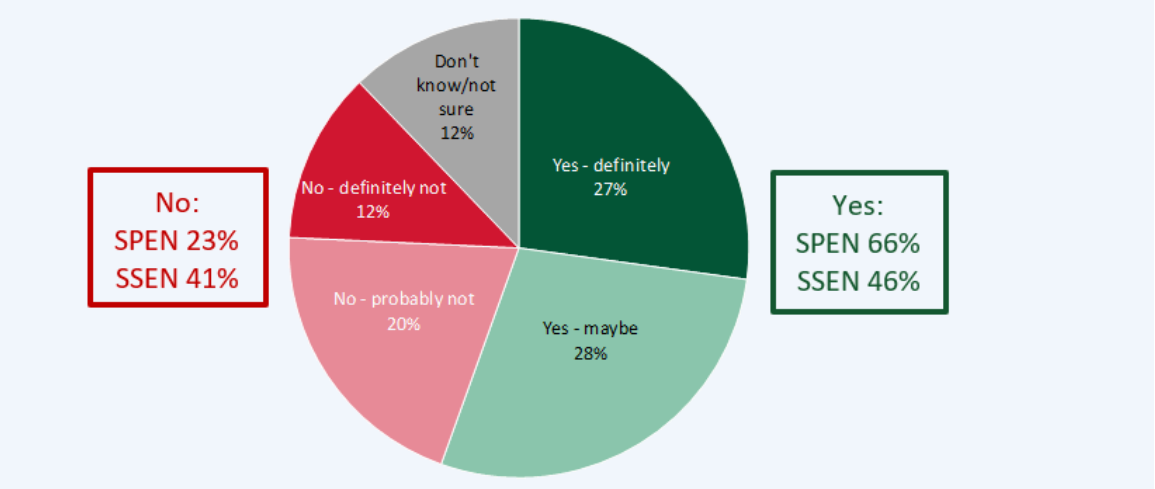
Among electricity-only households, a much higher proportion would prefer to have mains gas central heating (55%) than would not (32%).

Interest in mains gas is higher in the SPEN area (66%) than SSEN (46%), as shown by Figure 21. This is due to experiences of existing heat systems, with electricity-only consumers in the SPEN area less satisfied with their current heating system than their SSEN counterparts (48% vs. 62%).

There are also varying levels of interest by tenure; interest is highest among those privately renting (64%) compared to 55% owning their property and 51% of socially renting tenants. This may also have some impact on the differences by DNO area, with SSEN having a slightly lower proportion of private renters (14% vs. 16% in the SPEN area).

It may also be the case that consumers living in the SSEN area (i.e. the Northern part of the country) see having a gas connection as being less attainable than their Southern counterparts.

Figure 21: Would you prefer to have mains gas central heating if you were able to? (Q17)



Base: those with mains electricity only (397)

Attitudes to the future of heat – segmentation by consumer type

Lower social grades tend to be less satisfied with their heating system. However, they are no more likely to want mains gas central heating than higher social grades.

Satisfaction with heating system increases with age. However, as with social grade, while younger consumers are less satisfied with how they currently heat their home, consumers of this age who are off-gas are no more likely to want mains gas central heating than their older counterparts.

Rather, these differences are driven mainly by form of heating used; younger and lower social grade consumers are more likely than older or higher social grades to have electric storage heaters as their main form of heating.

There are no differences by vulnerability.

Table 17: Attitudes to future of heat by segment

Indicator	SEG			Age			Urban/Rural		DNO	
	AB	C1C2	DE	16-29	30-64	65+	Urban	Rural	SPEN	SSEN
Satisfied with current heating system (all)	84%	77%	70%	63%	77%	89%	77%	72%	78%	74%
Satisfied with current heating system (those without mains gas)	66%	58%	45%	39%	52%	80%	45%	68%	48%	62%
Definitely prefer to have mains gas central heating	26%	30%	24%	19%	34%	20%	22%	33%	30%	25%

4.8 Fairness of the Electricity System

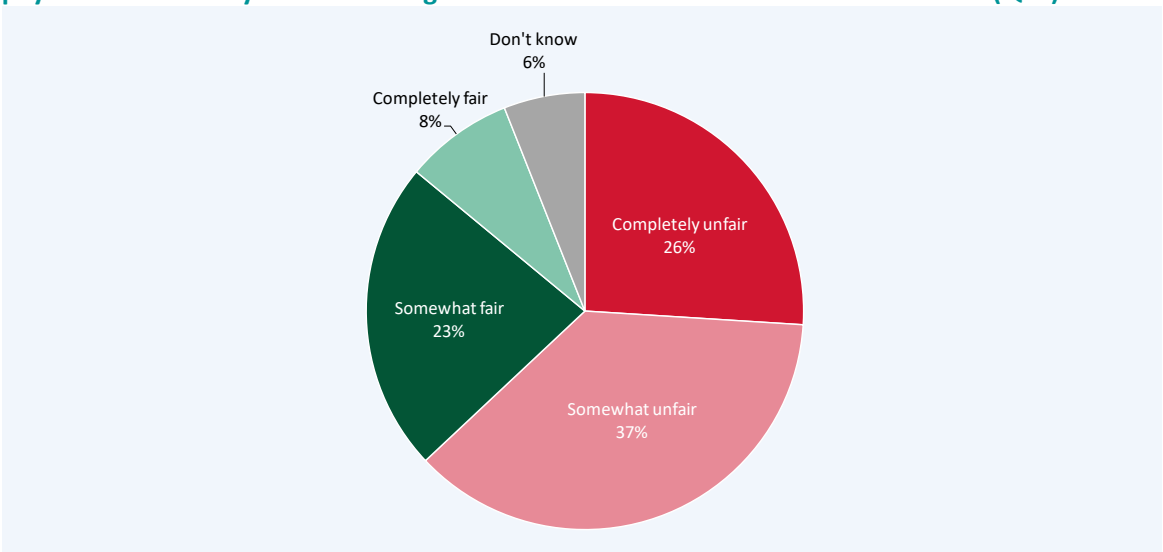
Key Findings

- The majority perceive the fact that electricity distribution charges are higher in the North of Scotland than the South as unfair.
- The majority of residents in both the SPEN and SSEN areas perceive this to be unfair (albeit more so in the more costly North). However, when tested qualitatively, consumers appreciate the reasons behind the variation in costs and, although seeing the situation as not being ideal, do not support the idea of paying more to enable customers in the North to pay the same amount as those in the South.
- A large majority perceive that it is fair that those generating or storing energy pay lower network charges, even though the network is there to provide back up to these households.

Fairness of regional variations in network charges

A majority of consumers (63%) believe it is unfair that households in the North of Scotland pay more for their electricity distribution network than those in the South.[14] This is more than twice the proportion that believe the differences are fair (31%).

Figure 22: To what extent do you think that it is fair that households in the South of Scotland pay less in electricity network charges than households in the North of Scotland? (Q46)



Base: all participants (1,507)

[14] Participants were informed that the average annual electricity distribution charge for a household in the SSEN area is £122, while the charge for a household in the SPEN area with the same electricity usage is £95.

The majority of consumers in both the SPEN and SSEN areas perceive that higher network charges in the north of Scotland are unfair, although unsurprisingly the majority is larger among consumers in the SSEN area:

Table 18: Fairness in regional distribution charge variations

Network	Unfair	Fair
SSEN	78%	18%
SPEN	55%	38%

Views are strongest among consumers living in the Highlands and Islands (47% feel it is completely unfair vs. 26% overall) and North East Scotland (41%).

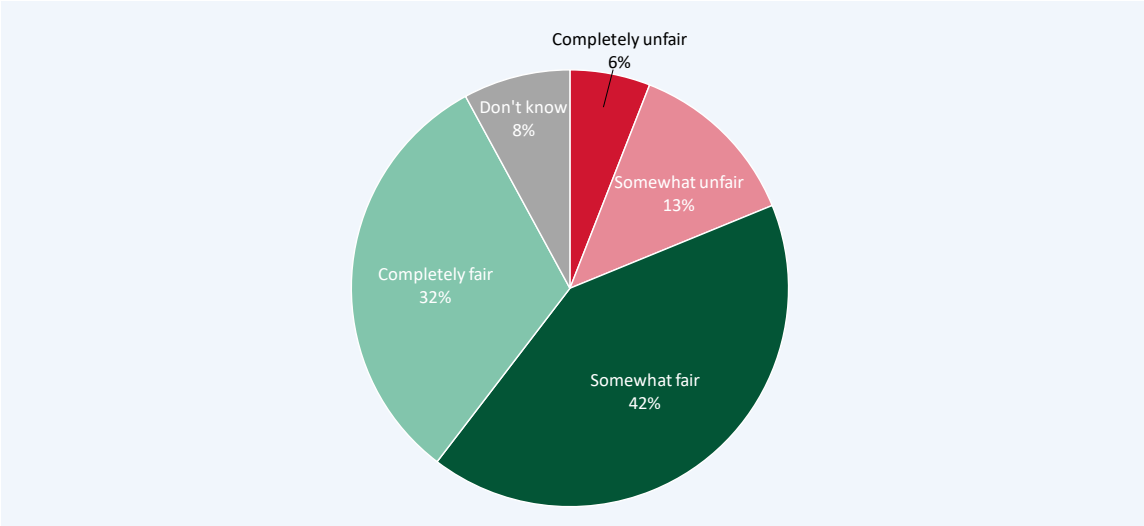
The qualitative discussion revealed that participants were accepting of this difference and appreciated that it reflects the different geographies of the network areas being served. The fact there are logistical reasons why the variation exists left a majority feeling the variation is not ideal but, fundamentally, explained and justified by these factors.

It may be that, when considered in a more discursive format (i.e. discussion group), consumers are more accepting of these reasons. However, it should also be noted that the location for the discussion groups was in Stirling, just a small number of miles from the SPEN/SSEN border. The fact these customers were only just located in the cheaper part of the country may also have influenced this. Certainly, when asked about the idea of evening the bill profiles by raising the bill in the south to bring the bill in the north down, this was not a popular concept.

Fairness of charges for those making less use of the electricity network

As shown by Figure 23 very large majority (73%) perceive that it is fair that people using technologies to generate or store energy pay lower electricity network charges, even though they still require the network as a backup. This figure rises to 82% among people with an electric vehicle or a form of renewable energy generation.

Figure 23: To what extent do you think that it is fair that people that own technologies that generate or store power pay less in electricity network charges? (Q43)



Base: all participants (1,507)

Fairness – segmentation by consumer type

Unsurprisingly, a much higher proportion of SSEN residents perceive the higher network charges in their area to be unfair. An even higher proportion of residents in the Highlands and Islands perceive it to be unfair (83%).

Consumers with a vulnerability, older consumers and those of a lower social grade are also more inclined to find this situation unfair.

Consumers are largely supportive of households being able to reduce their network bills through taking advantage of technology, but older consumers are slightly more likely to find this unfair.

There are no differences by urban/rural status.

Table 19: Fairness by segment

Indicator	SEG			Age			DNO		Vulnerability	
	AB	C1C2	DE	16-29	30-64	65+	SPEN	SSEN	Vulnerable (including 75+)	None
Unfair for residents in the South of Scotland to pay less in electricity network charges than households	58%	61%	71%	56%	63%	71%	55%	78%	66%	58%
Unfair that people that own technologies that generate or store power pay less in electricity	20%	17%	20%	16%	17%	24%	18%	19%	19%	16%

4.9 Views of Vulnerable Consumers

Key Findings

- Unsurprisingly, vulnerable consumers feature more strongly in aspects of the research that is most directly relevant to them. However, in most other ways they are similar to consumers without any form of vulnerability.
- They have more contact with SGN on issues around vulnerability. They prioritise investment – for both gas and electricity - to help vulnerable consumers more highly. They show more concern that lower income households may not be able to engage as easily with energy networks/technology and are more supportive of measures to help them do so.

This section describes the views and experiences of customers who have some form of vulnerability. The measure of vulnerability is based on a number of factors and includes anyone with a household member meeting at least one of the following criteria:

- Aged 75 or older
- Child under the age of five
- Lives with a health condition, illness, physical or mental health problem or disability which limits the daily activities or the work they can do
- Is in receipt of benefits

These characteristics were selected as they resemble some of the most common criteria for gas and electricity customers to be signed up to the electricity and gas networks' Priority Services Register (PSR).

This section also reports separately on consumers with multiple vulnerabilities i.e. they experience at least two of the above factors.

Awareness levels of the networks are similar to those who are not vulnerable. The only exception is among those aged 75+ with multiple vulnerabilities. They are slightly less likely to know that the networks maintain the local gas and electricity infrastructure (multiple vulnerability 66% vs no vulnerability 74%).

Vulnerable consumers are equally likely to contact their electricity distributor as those who are not vulnerable. Unsurprisingly, a high proportion of consumers with multiple vulnerabilities had contact with their electricity distributor about services for vulnerable people than those who are not vulnerable (vulnerable 29% vs non-vulnerable 3%).

Satisfaction with DNO contact is even higher among customers with a vulnerability; among those with at least one vulnerability, 2% were dissatisfied with the contact they had with their electricity supplier compared with 11% for those without any vulnerabilities.

Gas consumers experiencing a vulnerability are more likely to have contacted SGN than non-vulnerable consumers (vulnerability 10% vs no vulnerability 5%), but the reasons for doing so are no different.

Vulnerable consumers' priorities for investment are broadly similar to non-vulnerable customers, but they give lower priority to improving environmental impacts and innovation and higher priority to protecting vulnerable customers.

Interest in energy saving technologies is lower among vulnerable consumers, but is still substantial:

- Time of use tariffs:
  - Any vulnerability: 58% interested
  - Multiple vulnerability: 53% interested
  - No vulnerability: 61% interested

- Battery storage:
  - Any vulnerability: 33% not at all interested
  - Multiple vulnerabilities: 36% not at all interested
  - No vulnerability: 24% not at all interested

- Electric vehicle charging:
  - Any vulnerability: 28% interested
  - Multiple vulnerabilities :26% interested
  - No vulnerability: 39% interested

Consumers with multiple vulnerabilities are less likely to believe it is fair that people with energy saving or generating technologies pay lower electricity network charges:

- Multiple vulnerabilities: 69% fair
- No vulnerability: 77% fair

Vulnerable consumers are more concerned that lower income households might not be able to take advantage of technology to help them reduce their energy bills. They are also more supportive of measure to help lower income household adapt to a changing energy system but show no differences in preferences in the way lower income households could be helped.

- Proportion agreeing they are concerned that lower income households might not be able to take advantage of technology to help them reduce their energy bills:
  - Any vulnerability: 81%
  - Multiple vulnerabilities: 82%
  - No vulnerability: 73%

- Proportion agreeing that the networks should help lower income households adapt to ways of engaging with the energy network:
  - Any vulnerability: 84%

- Multiple vulnerabilities: 86%
- No vulnerability: 74%

A larger majority of vulnerable consumers than non-vulnerable ones believe that it is unfair for SSEN residents to pay higher electricity network charges:

- Any vulnerability: 66% unfair
- Multiple vulnerabilities: 67% unfair
- No vulnerability: 58% unfair.

Appendix A

Glossary of abbreviations and terms used in this report

Glossary of terms

- **CAS**: Citizens Advice Scotland
- **BEIS**: Department for Business, Energy and industrial Strategy
- **DNO:** Distribution Network Operator
- **EV:** Electric vehicle
- **GDN:** Gas Distribution Network
- **Ofgem**: Office of Gas and Electricity Markets (regulator of the Great Britain energy market)
- **PSR:** Priority Services Register. This is a free service provided by energy suppliers and network operators to customers who may have particular needs. Each energy supplier and network operator maintains its own register and provides additional support to people registered to the PSR, such as advanced warnings of planned power cuts, information and advice.
- **SEG:** Socio-Economic Grade, a classification system based on occupation of the chief income earner of the household.

Appendix B

Survey questionnaire

SYSTEM INFORMATION:
Interviewer number:
Interviewer name:
Date:
Time interview started:

Introduction

TABLET/CAPI

Good morning/afternoon/evening. My name is ..... from Accent and I am carrying out research for Citizens Advice Scotland into attitudes towards the energy services you receive. If you need more information on what Citizens Advice Scotland does, **please click here**[15].

Can I just ask you a couple of questions to check that you are eligible to take part in this research?

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society.

ONLINE IN UK

Thank you very much for agreeing to complete this on-line survey which is being conducted by Accent on behalf of Citizens Advice Scotland into attitudes towards the energy services you receive. The closing date for completion of this survey is 8th March 2019. If you need more information on what Citizens Advice Scotland does, **please click here**[1].

The research is being conducted under the terms of the MRS code of conduct and is completely confidential. If you would like to confirm Accent's credentials, please call the MRS free on 0800 975 9596.

We will just ask you a few questions to check that you are eligible to take part in this research.

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. If you would like to confirm Accent's credentials, type Accent in the search box at: https://www.mrs.org.uk/researchbuyersguide.

IF MOBILE DEVICE SHOW: **This survey is best undertaken on a tablet or a PC. If you do use a smartphone you can switch between desktop mode and mobile mode at any time by clicking the button at the bottom of the screen.**

NEW SCREEN

How to complete the questionnaire

Please use the  at the bottom of each page to go forward. As soon as you do this your answer is saved. If you need to go back, please use the  button.

[15] **Citizens Advice Scotland (CAS)** provides independent impartial advice to consumers on a wide range of issues and campaigns to influence social policy at a local and national level. It helps more than 295,000 people solve their problems each year in communities everywhere from city centres to the Highlands and Islands.

If you leave the survey idle for a while, you will be logged out automatically, but don't worry, your answers will be saved so long as you have completed a question by pressing the forward button 

Scoping questions

For the purposes of administering the questionnaire and for analysis, we may collect demographic information. You do not have to answer any questions that you do not wish to and if you do you can withdraw your consent for us to process this information at any time. Any personal data collected over the course of this interview will be held securely and will not be shared with any third party unless you give permission (or unless we are legally required to do so). Our privacy statement is available at www.accent-mr.com/privacy/.

Do you agree to proceeding with the interview on this basis?

Yes
No **THANK AND CLOSE**

Q1. Do you have mains gas and/or mains electricity in your home?

Mains gas only
Mains electricity only
Mains gas and electricity
Neither THANK AND CLOSE
Unsure THANK AND CLOSE
Prefer not to answer THANK AND CLOSE

Q2. **ASK IF Q1=1** You said you only have mains gas and do not have mains electricity in your home. Can you just confirm that is correct?

Yes – I have mains gas only
No – I have mains electricity only
No – I have mains gas and electricity
Unsure THANK AND CLOSE

Q3. **SHOW IF ONLINE** Are you responsible – either solely or jointly – for your household's energy bills?
SHOW IF CAPI/TABLET: PLEASE READ OUT Please can I confirm that you are responsible – either solely or jointly – for your household's energy bills?

Yes
No **THANK & CLOSE**
Prefer not to say **THANK & CLOSE**

Q4. **ASK IF TABLET/CAPI ONLY, ELSE GO TO Q6** Do you have access to the internet either at home or at work or at some other location?

Yes
No **RECRUIT AS DIGITALLY EXCLUDED**
Unsure
Prefer not to answer **THANK AND CLOSE**

Q5. **ASK IF Q4 = YES OR UNSURE, ELSE SKIP** Thinking about the last six months, which of the following activities, if any, have you used the internet for? **MULTICODE. SHOW IF CAPI/TABLET: PLEASE READ OUT**

	Email	**DIGITAL EXCLUDED IF ONLY EMAIL TICKED**
	Generally browsing the internet	
	Online banking	
	Accessing news and sport websites	
	Social networking websites (e.g. Facebook, Twitter)	
	Buying goods or services online (e.g. books, CDs, tickets, groceries)	**SCREEN OUT**
	Selling things on platforms such as eBay or Gumtree	
	Downloading/streaming games, movies, TV shows etc	
	Using government services (e.g. TV licence, road tax, passport etc)	
	Other	
	None of these **EXCLUSIVE**	**DIGITAL EXCLUDED**

DP: CHECK MINIMUM QUOTAS FOR DIGITALLY EXCLUDED (100% OF THE FACE-TO-FACE SAMPLE WILL NEED TO BE DIGITALLY EXCLUDED) AND CONTINUE IF POSSIBLE

Q6. **SHOW IF ONLINE:** Which of the following age groups are you in? **SHOW IF CAPI/TABLET: PLEASE READ OUT** What is your age?

16 - 29
30 - 49
50 - 64
65 - 74
75 or older
Prefer not to say **THANK AND CLOSE**

DP NOTE MINIMUMS:

ONLINE:	SPEN	SSEN
16 – 29	MINIMUM %	MINIMUM %
30 - 64	MINIMUM %	MINIMUM %
65 or older	MINIMUM %	MINIMUM %

CAPI / TABLET:
16-34 (MINIMUM %)
35-54 (MINIMUM %)
55- 64 (MINIMUM %)
65+ (MINIMUM %)
DP: CHECK MINIMUM QUOTAS AND CONTINUE IF POSSIBLE

Q7. **SHOW IF ONLINE:** Please indicate your gender. CAPI/TABLET: PLEASE RECORD GENDER BUT DO NOT ASK

Male
Female
Prefer not to say **THANK AND CLOSE**

DP NOTE MINIMUMS

ONLINE:	SPEN	SSEN
Male	MINIMUM 44%	MINIMUM 44%
Female	MINIMUM 46%	MINIMUM 46%

CAPI/TABLET
Male (MINIMUM %)
Female (MINIMUM %)

DP: CHECK MINIMUM QUOTAS AND CONTINUE IF POSSIBLE

Q8. How would you describe the occupation of the main income earner in your household? **SHOW IF CAPI/TABLET: PLEASE READ OUT**

1. Senior managerial or professional
2. Intermediate managerial, administrative or professional
3. Supervisor; clerical; junior managerial, administrative or professional
4. Manual worker (with industry qualifications)
5. Manual worker (with no qualifications)
6. Unemployed
7. Retired
8. Student
9. Unsure **THANK AND CLOSE**
10. Prefer not to say **THANK AND CLOSE**

Q9. **IF Q8 = 7 (RETIRED), ASK ELSE SKIP** Does the main income earner have a state pension, a private pension or both? **SHOW IF CAPI/TABLET: PLEASE READ OUT**

1. State only
2. Private only
3. Both a private and state pension
4. Unsure **THANK AND CLOSE**
5. Prefer not to say **THANK AND CLOSE**

Q10. **IF Q9 = PRIVATE ONLY OR BOTH, ASK ELSE SKIP** How would you describe the main income earner's occupation before retirement? **SHOW IF CAPI/TABLET: PLEASE READ OUT**

1. Senior managerial or professional
2. Intermediate managerial, administrative or professional
3. Supervisor; clerical; junior managerial, administrative or professional
4. Manual worker (with industry qualifications)
5. Manual worker (with no qualifications)
6. None of these
7. Prefer not to say **THANK AND CLOSE**

DP NOTE MINIMUMS

ONLINE:	SPEN	SSEN
AB	MINIMUM %	MINIMUM %
C1C2	MINIMUM %	MINIMUM %
DE	MINIMUM %	MINIMUM %

CAPI/TABLET
Male (MINIMUM %)
Female (MINIMUM %)

DP: CHECK MINIMUM QUOTAS AND CONTINUE IF POSSIBLE

Q11. **SHOW IF ONLINE:** We are now going to ask for your postcode. We would like to reassure you that we are only using this for the purposes of analysing the sample and to determine whether people live in urban or rural parts of the country. This information is not passed on to anyone else and is not used for any other purposes.

Please enter your postcode using the 3 steps below.

1. Select the initial letters of your postcode from the drop down menu in the first box. This is the one headed “Area - drop down” (e.g. if your full postcode is EH7 4NS, select “EH”)

2. Enter the number or numbers that come before the space in your postcode in the second box. This is the one headed “District Number” (e.g. if your full postcode is EH7 4NS, enter 7)

3. Enter the numbers and letters that are after the space in your postcode in the third box headed “Sector and Unit” (e.g. if your full postcode is EH7 4NS, enter 4NS)

SHOW IF CAPI/TABLET: PLEASE READ OUT: Please can you tell me your postcode. We are only using this for the purposes of analysing the sample and to determine whether people live in urban or rural parts of the country. This information is not passed on to anyone else and is not used for any other purposes.

INTERVIEWER PLEASE ENTER THE POSTCODE AS FOLLOWS

4. Select the initial letters of your postcode from the drop down menu in the first box. This is the one headed “Area - drop down” (e.g. if your full postcode is EH7 4NS, select “EH”)

5. Enter the number or numbers that come before the space in your postcode in the second box. This is the one headed “District Number” (e.g. if your full postcode is EH7 4NS, enter 7)

6. Enter the numbers and letters that are after the space in your postcode in the third box headed “Sector and Unit” (e.g. if your full postcode is EH7 4NS, enter 4NS)

SHOW IF CAPI/TABLET DO NOT READ - INTERVIEWER INSTRUCTION: Select area part of postcode from drop down list, then add district number. Please check carefully as we are matching to a look-up table. Use phonetic alphabet to clarify letters.

SHOW IF CAPI/TABLET FOR INTERVIEWER INFORMATION: PHONETIC ALPHABET

A	Alpha	J	Juliett	S	Sierra
B	Bravo	K	Kilo	T	Tango
C	Charlie	L	Lima	U	Uniform
D	Delta	M	Mike	V	Victor
E	Echo	N	November	W	Whiskey
F	Foxtrot	O	Oscar	X	X Ray
G	Golf	P	Papa	Y	Yankee
H	Hotel	Q	Quebec	Z	Zulu
I	India	R	Romeo		

SHOW ALL

DROP DOWN MENU + BOX FOR POSTCODE NUMBERS HERE

Prefer not to answer **GO TO Q13**
None of the above letters

Q12. **SHOW IF ONLINE** The postcode you've given us is [DP: insert postcode from Q11]. Is that correct?

SHOW IF CAPI/TABLET: PLEASE PREAD OUT Just to check, this makes your postcode **[DP: insert postcode from Q11]**. Is this correct?

DO NOT READ - INTERVIEWER INSTRUCTION: Please check carefully as we are matching to a look-up table. Use phonetic alphabet to clarify letters.

Yes
No **GO BACK TO Q11** SHOW TO ALL PARTICIPANTS. WE WILL NOW ASK YOU TO CONFIRM YOUR POSTCODE

SHOW IF CAPI/TABLET: FOR INTERVIEWER INFORMATION: PHONETIC ALPHABET

A	Alpha	J	Juliett	S	Sierra
B	Bravo	K	Kilo	T	Tango
C	Charlie	L	Lima	U	Uniform
D	Delta	M	Mike	V	Victor
E	Echo	N	November	W	Whiskey
F	Foxtrot	O	Oscar	X	X Ray
G	Golf	P	Papa	Y	Yankee
H	Hotel	Q	Quebec	Z	Zulu
I	India	R	Romeo		

Q13. **ASK IF Q11 = PREFER NOT TO ANSWER. SHOW IF ONLINE:** So we can determine which part of the country you live in please can you tell us the first part of your postcode. For example, if your full postcode is EH7 4NS, please just provide the first part i.e. EH7. Please select the letters from the drop-down menu (e.g. EH) and enter the numbers in the box (e.g. 7)

SHOW IF CAPI/TABLET: PLEASE READ OUT: So we can determine which part of the country you live in please can you tell me the first part of your postcode. For example, if your full postcode is EH72NS, please just tell me the first part i.e. EH7.

Prefer not to answer **THANK AND CLOSE**
None of the above letters **THANK AND CLOSE**

DP NOTE MINIMUMS AND SHOW ON ANALYSIS TOOL

SPEN	SPD	24.7%
	SPMW	18.6%
SSEN	SSEH	9.4%
	SSES	37.3%

Central Scotland	8.1%
Glasgow	9.9
Highlands and Islands	9.0
Lothian	9.9
Mid Scotland and Fife	9.9
North East Scotland	20.7
South Scotland	11.7
West Scotland	10.8

ONLINE:	SPEN	SSEN
Urban	MINIMUM 76%	MINIMUM 60%
Rural	MINIMUM 14%	MINIMUM 30%

DP: CHECK MINIMUM QUOTAS AND CONTINUE IF POSSIBLE

Q14. INTENTIONALLY BLANK

Main Questionnaire – Awareness and understanding of networks

Thank you, I can confirm you are in scope for the survey. The questionnaire will take about 20 minutes to complete.

SHOW IF TABLET/CAPI: At the end of the interview we will give you a £5 incentive to thank you for your time.

For convenience you can stop and return to complete the questionnaire as many times as you wish, although once submitted you will not be able to enter again.

Q15. Which of these best describes the main form of heating you use at home (that is the type you use most often)? If you commonly use more than one heating type, please select each that you use. **MULTICODE**

CAPI/TABLET: PLEASE SHOW SCREEN

Electric storage heaters
Gas central heating with radiators
Warm air central heating
Fixed gas fire/Gas convector
Portable gas heater (Calor gas) or paraffin heater
Plug in Electric fire or heater
Electric panel heating
Solid Fuel-open grate, enclosed grate/stove
Heat pump systems
Other (**Please click on the box and type in your answer**)

Q16. And to what extent are you satisfied or dissatisfied with your current heating system? Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and, for online, code 12 Prefer not to say"**

Q17. **ASK IF Q1= 2 OR IF Q2 = 2.** Would you prefer to have mains gas central heating if you were able to?

CAPI/TABLET: PLEASE READ OUT

Yes – definitely
Yes – maybe
No – probably not
No – definitely not
Don't know/not sure **CAPI/TABLET:** DO NOT READ OUT

Q18. If you had a power cut, who would you contact? **SINGLE CODE**

CAPI/TABLET: DO NOT READ OUT
My electricity network company
My energy supplier
My Local Council
Landlord
Building manager
Other (**Please click on the box and type in your answer**)
I would not contact anyone
Don't know/not sure
RANDOMISE CODES 1-5

Q19. **ASK IF Q1 = 3 OR Q2 = 1 OR 3** If you had a problem with your gas supply or you thought there was a gas leak, who would you contact? **SINGLE CODE**

CAPI/TABLET: DO NOT READ OUT
My gas network company
My energy supplier
My Local Council
Landlord
Building manager
Other (**Please click on the box and type in your answer**)
I would not contact anyone
Don't know/not sure
RANDOMISE CODES 1-5

Q20. This survey is about the gas and electricity distribution networks in Scotland. Which of the following, if any, do you think the gas/electricity distribution networks are responsible for? **Please do not look up information about gas and electricity distribution networks before you answer this question. We are looking for your immediate thoughts.**

CAPI/TABLET: PLEASE READ OUT
Making new connections to the electricity and gas grid (e.g. for new housing developments)
Maintaining and operating the local infrastructure that delivers gas and electricity to homes and businesses
Maintaining and operating the national infrastructure that delivers gas and electricity to homes and businesses
Selling gas and electricity to customers
Producing or sourcing gas and electricity for their customers
Fixing power cuts
Taking your calls if there is a power cut

IF Q1 = 3 OR Q2 = 1 OR 3 Taking reports of gas leaks and manage repairs
Don't know **CAPI/TABLET: DO NOT READ OUT**

RANDOMISE CODES 1-8

Explanation of networks

The electricity and gas distribution networks are responsible for transporting electricity and gas to homes and businesses across Scotland.

They do not sell electricity or gas directly to customers.

On the next screen you will see an explanation of what role the electricity and gas networks play in the energy system.

[NEW SCREEN – PRESENTED VIA GIF - see slides 1-4]

CAPI/TABLET: PLEASE SHOW SCREEN AND READ OUT

Please read the information below and click the forward button once you have read each paragraph.

Energy generation – electricity and gas is produced e.g. gas is extracted from gas reserves and electricity is produced from power stations (coal, nuclear, gas-fired) and wind and hydro-electric.

Transmission – electricity and gas is transported long distances across the country. Electricity is carried at high voltage using overhead power lines, while gas is carried in high pressure underground gas pipes. This happens at a national level and is carried out by the gas and electricity transmission companies.

Distribution - electricity and gas is transported at a regional level by the electricity and gas distribution network companies. The electricity distribution company transports the electricity at low voltage using overhead and underground power lines. The gas distribution company transports gas using low pressure pipes. These companies are responsible for maintaining the regional and local infrastructure and for dealing with power cuts and repairs (e.g. to electricity pylons or the underground wires and pipes).

For the remainder of this survey, the focus of the questions we will ask you is on the electricity and gas distribution companies.

The electricity and gas distribution companies do not sell energy and they do not charge you directly for their services. If you have questions about your energy bills, this is dealt with by your energy supplier rather than the distribution company.

DP: At the bottom of each screen please add:
Top of each screen
Slide x of 4
Bottom of each screen
When you have finished reading this information, please press the forward button to see the next slide (slide x of 4)

Q21. Customers pay for the costs of the services that the electricity and gas distribution networks provide through their energy bills. A proportion of your energy bill goes to the [**IF Q1 = 3 OR Q2 = 1 OR 3** gas and] electricity distribution network for your area. Before today were you aware of this? **SINGLE CODE**

Yes
No

Don't know

[NEW SCREEN]
The amount that households pay towards their **SHOW IF Q1 = 2 OR 3 OR IF Q2 = 2 OR 3** electricity **SHOW IF Q1 = 3 OR Q2 = 3** and gas networks **SHOW IF Q2 = 1** gas networks **SHOW ALL** is as follows:

IF SCOTTISH AND SOUTHERN ENERGY NETWORKS AREA
SHOW IF Q1 = 2 OR 3 OR Q2 = 2 OR 3
Electricity: For households in northern Scotland, based on the average electricity usage in Great Britain, the amount that goes to the electricity distribution network company is £122[16] (24% of the total electricity bill).

SHOW IF Q1 = 3 OR Q2 = 1 OR 3
Gas: For households in Scotland, based on the average gas usage in Great Britain, the amount that goes to the gas distribution network company is £126[17] (22% of the total gas bill).

IF SP ENERGY NETWORKS AREA
SHOW IF Q1 = 2 OR 3 OR Q2 = 2 OR 3
Electricity: For households in southern Scotland, based on the average electricity usage in Great Britain, the amount that goes to the electricity distribution network company is £95[2] (20% of the total electricity bill).

SHOW IF Q1 = 3 OR Q2 = 1 OR 3
Gas: For households in Scotland, based on the average gas usage in Great Britain, the amount that goes to the gas distribution network company is £126[18] (22% of the total gas bill).

Please click the INSERT IMAGE OF "I" BUTTON HERE button for more information.

Q22. Before today, how well do you feel you understood what the electricity and gas distribution network companies' roles are?

CAPI/TABLET: READ OUT
Very well
Fairly well
Not very well
Not at all well
Don't know **CAPI/TABLET: DO NOT READ OUT**

Q23. Do you know who the electricity distribution company is in your area?

Yes (**Please click on the box and type in your answer**)
No

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[16] Figures are based on average use; households using less than the average will pay less in network charges, while households using more than the average will pay more than this amount. It is also likely that this figure would be higher for households who use electricity as their primary source of heating.
[17] Figures are based on average use; households using less than the average will pay less in network charges, while households using more than the average will pay more than this amount.
[18] Figures are based on average use; households using less than the average will pay less in network charges, while households using more than the average will pay more than this amount.

Q24. And do you know who the gas distribution company is in Scotland?

Yes (**Please click on the box and type in your answer**)
No

[NEW SCREEN]

The electricity distribution company for your area is: **SHOW COMPANY FROM POSTCODE LOOKUP** Scottish And Southern Energy or SP Energy Networks.

The gas distribution company for Scotland is: SGN

Electricity Distribution Networks

- **Scottish and Southern Electricity Networks (SSEN)** run the low energy voltage electricity distribution network in the North of Scotland.
- **SP Energy Networks** run the low energy voltage electricity distribution network in the South of Scotland.

Gas Distribution Network

Scotia Gas Networks (SGN) run the gas distribution network in Scotland.

Q25. **ASK IF Q1 = 2 OR 3 OR Q2 = 2 OR 3** Have you ever contacted **SHOW COMPANY FROM POSTCODE LOOKUP** Scottish And Southern Energy Networks / SP Energy Networks for any reason? **SINGLE CODE**

Yes
No
Don't know / Can't remember

Q26. **ASK IF YES AT Q25 (1) ELSE GO TO Q28a:** What did you contact **SHOW COMPANY FROM POSTCODE LOOKUP** Scottish And Southern Energy Networks about / SP Energy Networks about? **MULTI CODE (APART FROM DK/CAN'T REMEMBER) ROTATE CODES 1-6**

To report a power cut
About a planned interruption to your power supply
About road works they were carrying out

About information you received from them
To request a new connection (e.g. for a new property)
About the support they might provide for vulnerable customers
Other reason: (**Please click on the box and type in your answer**)

Don't know / Can't remember

Q27. **ASK IF YES AT Q25** How satisfied were you with the service that you received from **SHOW COMPANY FROM POSTCODE LOOKUP** Scottish And Southern Energy Networks / SP Energy Networks when you contacted them? Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and code 12 Prefer not to say"**

Q28. **DO NOT ASK IF Q2 = 1. IF Q2 = 1 GO TO Q30** Based on what we have told you about the services it provides, how satisfied or dissatisfied are you with the reliability of your electricity supply from **SHOW COMPANY FROM POSTCODE LOOKUP** (Scottish And Southern Energy Networks / SP Energy Networks)? Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and code 12 Prefer not to say"**

Reliability (a reliable supply of electricity e.g. lack of power cuts)

Q28b And how would you rate the value for money of the service provided by **SHOW COMPANY FROM POSTCODE LOOKUP** (Scottish And Southern Energy Networks / SP Energy Networks)? As a reminder[**IF SCOTTISH AND SOUTHERN ENERGY NETWORKS AREA** roughly 24% **IF SP ENERGY NETWORKS AREA** roughly 20%] of the average household electricity bill goes to the electricity distribution company). Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and code 12 Prefer not to say**

Q29. **ASK IF Q1 = 2 OR 3 OR Q2 = 2 OR 3** And how satisfied are you <u>overall</u> with the service that you receive from your electricity distribution company **SHOW COMPANY FROM POSTCODE LOOKUP** (Scottish And Southern Energy Networks / SP Energy Networks)? Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and code 12 Prefer not to say"**

Q29a. **ASK IF Q29 = 1-10** Why did you give that score? **SHOW TO CAPI: PLEASE PROBE FOR AS MUCH DETAIL AS POSSIBLE TO HELP EXPLAIN THEIR RESPONSE. SHOW TO ONLINE** Please write in as much detail as possible to help us understand why you gave that response.
Please click on the box and type in your answer

Q30. **ASK IF Q1 = 3 OR Q2 = 1 OR 3** Have you ever contacted SGN for any reason? SINGLE CODE

Yes
No
Don't know / Can't remember

Q31. **ASK IF YES AT Q30** What did you contact SGN about? **MULTI CODE (APART FROM DK/CAN'T REMEMBER) ROTATE CODES 1-6**

To report a problem with my gas supply / a gas leak
About a planned interruption to your gas supply

About road works they were carrying out
About information you received from them
To request a new connection (e.g. for a new property)
About the support they might provide for vulnerable customers
Other reason: (**Please click on the box and type in your answer**)
Don't know / Can't remember

Q32. **ASK IF YES AT Q30** How satisfied were you with the service that you received from SGN when you contacted them? Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and code 12 Prefer not to say"**

Q33. **ASK IF Q1=3 OR IF Q2=1 OR 3** Based on what we have told you about the services it provides, how satisfied or dissatisfied are you with the reliability of your gas supply that your gas distribution company (SGN) provides? Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and code 12 Prefer not to say"**

Q33b And how would you rate the value for money of the service provided by SGN? As a reminder roughly 22% of the average household gas bill goes to the gas distribution company). Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and code 12 Prefer not to say**

Q34. **ASK IF Q1=3 OR IF Q2=1 OR 3** Based on what we have told you about the services it provides, how satisfied are you overall with the service that you receive from your gas distribution company (SGN)? Please use a scale of 1 to 10, where 1 is extremely dissatisfied and 10 is extremely satisfied. **DP add code 11 "Don't know" and code 12 Prefer not to say"**

Q34a. **ASK IF Q34 = 1-10** Why did you give that score? **SHOW TO CAPI: PLEASE PROBE FOR AS MUCH DETAIL AS POSSIBLE TO HELP EXPLAIN THEIR RESPONSE. SHOW TO ONLINE** Please write in as much detail as possible to help us understand why you gave that response.
Please click on the box and type in your answer)

[NEW SCREEN]

We are now going to show you four screens about ways the energy system is changing. When you have finished reading the information on each screen, please click the forward button to see the next one.

[NEW SCREEN] – PRESENTED VIA GIF WITH IMAGES

DP: At the bottom of each screen please add:
Top of each screen
Slide x of 5
Bottom of each screen
When you have finished reading this information, please press the forward button to see the next slide (slide x of 5)

CAPI/TABLET: PLEASE SHOW SCREEN AND READ OUT IF NEEDED

Please now read the following information about ways in which the energy system is changing.

Much of the electricity network that provides homes and businesses with power was built in the 1950s and 1960s. The requirements of the electricity network are rapidly changing and investment is needed to bring it up to modern standards:

- There is now more low carbon energy generation (e.g. wind, solar etc) and more small-scale, localised energy generation (e.g. solar panels on homes and industrial buildings) that needs to connect to the grid.

- In recent years there has been significant growth in technologies like electric vehicles and small-scale battery storage. Battery storage refers to domestic batteries that allow you to store energy from things like solar panels or electric vehicles, to then use the power at a time that you need, reducing your need to buy energy.

- These things mean there is now a two-way flow of electricity between homes and the grid, whereas it used to be only from the grid to homes.

- All of these things place more demands on the electricity network and require it to be increasingly flexible to avoid constraints on the system.

[NEW SCREEN, WITH IMAGE OF TARGET REDUCTION]

CAPI/TABLET: PLEASE SHOW SCREEN

Please review the following information about environmental targets that the energy sector must help to achieve.

Scotland has committed to reduce its greenhouse gas emissions to 20% of 1990 levels by 2050.

When you have finished reading this information, please press the forward button to see the next slide.

Around half (51%) of the energy we consume in our homes and businesses is used for heating, the majority of which is supplied by natural gas. An estimated 79% of Scottish homes used natural gas as their primary heating fuel in 2016, so reducing carbon emissions from the heat system is a key priority to achieve these targets.

When you have finished reading this information, please press the forward button to see the next screen.

[NEW SCREEN]

The gas and electricity networks also operate in a regulated market:

- The electricity and gas distribution companies are regulated by Ofgem. This regulation is needed because, unlike with your energy supplier(s), you can't choose which company you use (unless you move to a different part of the country).
- Ofgem uses a system of 'price controls' to limit what the distribution companies can charge their customers. They also set targets for their performance on areas of service like reliability, customer service and environmental performance. These mechanisms are used to make sure the companies operate efficiently and offer value for money.

- Although the distribution companies' prices are limited by this regulation, they are allowed to charge enough to cover their costs and get a reasonable return on the money they invest.
- As part of this regulation, the electricity and gas distribution companies are required to produce business plans setting out the activities they will carry out, the service they will provide to customers and what the impact will be on customers' bills.

When you have finished reading this information, please press the forward button to see the next screen.

If you want to see this information again, please press the back button.

Q35d **ASK IF Q1 = 2 OR 3 OR Q2 = 2 OR 3** Please now imagine you are in charge of your electricity distribution company and you need to decide which areas to prioritise in its next business plan. Please review the following seven areas which you could invest in and then press the forward button. **ROTATE**

CAPI/TABLET: PLEASE SHOW SCREEN

Safety: ensuring homes and businesses receive a safe supply of electricity
Reliability: providing a reliable supply of electricity to customers
Affordability: keeping the cost of electricity affordable to customers
Environmental impact: minimising environmental impact of the electricity network's activities
Protecting vulnerable customers: making efforts to protect the most vulnerable so they are not left behind
Customer Satisfaction: maintaining and improving how satisfied customers are with the service they receive
Innovation: Innovating to meet the challenges the electricity network will face (e.g. allowing customers to interact with the network more flexibly) and to run things more efficiently

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Q35. **ASK IF Q1 = 2 OR 3 OR Q2 = 2 OR 3** Please now imagine you are in charge of your electricity distribution company and prioritise the areas to invest in, by using the 10 tokens on the left of the screen. They represent the budget available to the electricity distribution company.

You can decide how to use the budget in whichever way you would like but you need to use all 10 of the tokens. You do not have to allocate tokens to each area if you do not wish to.

To select the tokens please click it and drag it to the appropriate box. Please scroll down to make sure you see all of the areas to prioritise from.

DRAG AND DROP – 10 TOKENS, EACH TOKEN IS A GENERIC GOLD COIN

Safety: ensuring homes and businesses receive a safe supply of electricity
Reliability: providing a reliable supply of electricity to customers
Affordability: keeping the cost of electricity affordable to customers
Environmental impact: minimising environmental impact of the electricity network's activities
Protecting vulnerable customers: making efforts to protect the most vulnerable so they are not left behind
Customer Satisfaction: maintaining and improving how satisfied customers are with the service they receive
Innovation: Innovating to meet the challenges the electricity network will face (e.g. allowing customers to interact with the network more flexibly) and to run things more efficiently

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Q36. **ASK IF Q1 = 2 OR 3 OR Q2 = 2 OR 3** Are there any areas that you think were missing from the list of priorities? As a reminder, here are the areas you were trying to prioritise.

CAPI/TABLET: PLEASE SHOW SCREEN

PRESENT ALL ACTIVITIES/PRIORITIES FROM PREVIOUS QUESTION ON SCREEN AS REMINDER

No
Yes – **Please click on the box and type in your answer**

Q36a **ASK IF Q1 = 3 (GAS AND ELECTRICITY) OR IF Q2 = 3 (GAS AND ELECTRICITY)** And now please imagine you are making the same decisions for the gas distribution company. You need to decide which areas to prioritise in its next business plan. Please review the following seven areas which you could invest in and then press the forward button. **ROTATE**

CAPI/TABLET: PLEASE SHOW SCREEN

Safety: ensuring homes and businesses receive a safe supply of gas
Reliability: providing a reliable supply of gas to customers
Affordability: keeping the cost of gas affordable to customers
Environmental impact: minimising environmental impact of the gas network's activities
Protecting vulnerable customers: making efforts to protect the most vulnerable so they are not left behind
Customer Satisfaction: maintaining and improving how satisfied customers are with the service they receive
Innovation: Innovating to meet the challenges the gas network will face (e.g. reducing carbon emissions from the gas system) and to run things more efficiently

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Q36b **ASK IF Q2 = 1 (GAS ONLY)** Please now imagine you are in charge of your gas distribution company and need to decide which areas to prioritise in its next business plan. Please review the following seven areas which you could invest in and then press the forward button. **ROTATE**

Safety: ensuring homes and businesses receive a safe supply of gas
Reliability: providing a reliable supply of gas to customers
Affordability: keeping the cost of gas affordable to customers
Environmental impact: minimising environmental impact of the gas network's activities
Protecting vulnerable customers: making efforts to protect the most vulnerable so they are not left behind
Customer Satisfaction: maintaining and improving how satisfied customers are with the service they receive
Innovation: Innovating to meet the challenges the gas network will face (e.g. reducing carbon emissions from the gas system) and to run things more efficiently

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Q37. **ASK IF Q1 = 3 (GAS AND ELECTRICITY) OR IF Q2 = 3 (GAS AND ELECTRICITY).**

Please prioritise the areas to invest in by using the 10 tokens on the left of the screen. They represent the budget available to the gas distribution company.

You can decide how to use the budget in whichever way you would like but you need to use all 10 of the tokens. You do not have to allocate tokens to each area if you do not wish to.

To select the tokens please click it and drag it to the appropriate box. Please scroll down to make sure you see all of the areas to prioritise from.

ASK IF Q2 = 1 (GAS ONLY) Please prioritise the areas to invest in by using the 10 tokens on the left of the screen. They represent the budget available to the gas distribution company.

You can decide how to use the budget in whichever way you would like but you need to use all 10 of the tokens. You do not have to allocate tokens to each area if you do not wish to.

To select the tokens please click it and drag it to the appropriate box. Please scroll down to make sure you see all of the areas to prioritise from.

DRAG AND DROP – 10 TOKENS, EACH TOKEN IS A GENERIC GOLD COIN

Safety: ensuring homes and businesses receive a safe supply of gas
Reliability: providing a reliable supply of gas to customers
Affordability: keeping the cost of gas affordable to customers
Environmental impact: minimising environmental impact of the gas network's activities
Protecting vulnerable customers: making efforts to protect the most vulnerable so they are not left behind
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Q38. **ASK IF Q1 = 3 OR Q2 = 1 OR 3** Are there any areas that you think were missing from the list of priorities? As a reminder, here are the areas you were trying to prioritise .

PRESENT ALL ACTIVITIES/PRIORITIES FROM PREVIOUS QUESTION ON SCREEN AS REMINDER

CAPI/TABLET: PLEASE SHOW SCREEN

No
Yes – **Please click on the box and type in your answer**

Q39. Earlier we gave you information about the ways in which the energy system is changing. These things may mean that it could become more expensive to continue to use energy in the way we currently do.

To what extent, if at all, would you be willing to change the way that you use energy to keep your energy bills down? **ROTATE 1-3**

CAPI/TABLET: PLEASE READ OUT

I would change my energy use by a significant amount in order to keep my energy bills down
I would change my energy use by a small amount in order to keep my energy bills down
I would not change my energy use in order to keep my energy bills down
Don't know **CAPI/TABLET: DO NOT READ OUT**

Q40. **ASK IF Q39 = 3**. You said that you would not change your energy use in order to keep your energy bills down. Keeping in mind that it is likely to get more expensive to use energy in the way we currently do, how much do you agree or disagree with the following statement?

I would be willing to pay more to continue to use energy when and how I want to

CAPI/TABLET: PLEASE READ OUT

Strongly agree
Tend to agree
Tend to disagree
Strongly disagree
Don't know **CAPI/TABLET: DO NOT READ OUT**

Q41. Smart meters are being rolled out across Scotland. Smart meters send your energy supplier meter readings automatically and also have a display device which shows you how much energy you are using in near real time. The roll out of smart meters means there is now a wider choice of different energy tariffs available to consumers. One type of tariff is a 'time of use tariff' where you can get lower energy prices if you use more of your electricity at off-peak times and less at peak times.

For example, this might mean trying to use more energy intensive appliances less frequently in the evening and instead using them more often at night or during the day.

Based on this information, how interested would you be to sign up to a 'time of use tariff'?

CAPI/TABLET: PLEASE READ OUT

Very interested
Fairly interested
Not very interested
Not at all interested
Don't know **CAPI/TABLET:** DO NOT READ OUT

Q42. A. We would now like to ask you about three new technologies, which are all becoming more common. How interested would you be in **smart electric storage heaters**?

CAPI/TABLET: PLEASE SHOW SCREEN

Smart electric storage heaters store thermal energy during the night and use this to heat your home during the day. Storage heaters are primarily designed for customers on a time-of-use electricity tariff. Using a storage heater allows customers on these tariffs to use cheaper off-peak electricity to heat their home during the day.
Example cost: £250 - £800

IMAGE: \\accent-mr.com\accentdata\Projects\3262 Consumers' attitudes towards energy networks\DTP\Questionnaire images\Smart electric storage heaters.jpg

Very interested
Fairly interested
Not very interested
Not at all interested
Don't know

[NEW SCREEN]

CAPI/TABLET: PLEASE SHOW SCREEN

(B) And how interested would you be in **domestic battery storage**?

These are domestic forms of battery storage that allow you to store energy from things like solar panels or electric vehicles, to then use the power at a time that you need, reducing your need to buy energy. They tend to be a box about the size of a standard boiler.
Example cost: £2,500 - £6,000

IMAGE: \\accent-mr.com\accentdata\Projects\3262 Consumers' attitudes towards energy networks\DTP\Questionnaire images\Domestic battery storage.jpg

Very interested
Fairly interested
Not very interested

Not at all interested
Don't know

[NEW SCREEN]

CAPI/TABLET: PLEASE SHOW SCREEN

(C) And how interested would you be in **Smart electric vehicle charging?**

These are chargers that will charge your electric vehicle battery from the grid when electricity is in low demand and is therefore cheaper.
Example cost: £700 - £1,500 (there is also currently a grant allowing you to reduce the cost above by £500)

\\accent-mr.com\accentdata\Projects\3262 Consumers' attitudes towards energy networks\DTP\Questionnaire images\Smart electric vehicle charging.jpg

Very interested
Fairly interested
Not very interested
Not at all interested
Don't know

Q43. People that own the technologies in the previous question, and technologies like solar panels, get a lower proportion of their electricity from their electricity network, as they are able to generate and store their own power. They still require the network as a back-up.

To what extent do you think that it is fair that people that own these technologies pay less in electricity network charges? **ROTATE ORDER**

CAPI/TABLET: PLEASE READ OUT

Completely fair
Somewhat fair
Somewhat unfair
Completely unfair
Don't know **CAPI/TABLET:** DO NOT READ OUT

Q44. Please indicate whether you agree or disagree with the following statements. RANDOMISE STATEMENTS

CAPI/TABLET: PLEASE READ OUT

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know CAPI/TABLET: DO NOT READ OUT
The electricity and gas distribution companies should help households on lower incomes to adapt to the ways in which they can engage with the energy network (e.g. through new technology or using cheaper tariffs)						
I am concerned that households on lower incomes might not be able to take advantage of technology that helps them reduce their energy bills						

Q45. **ASK IF Q44_1 = STRONGLY OR TEND TO AGREE.** And in which of the following ways do you think the electricity and gas distribution companies should provide this support to lower income households? The cost of any initiatives that the network companies put in place for lower income households would be spread across all customers. **ROTATE CODES 1-3 MULTICODE**

CAPI/TABLET: PLEASE READ OUT

Replacing heating systems with smart lower carbon options (e.g. smart storage heaters)
Providing advice on how they can use new technologies or change their behaviour to get lower prices
Funding to reduce the cost of smart technology
None of the above
Other (**Please click on the box and type in your answer**)
Don't know **CAPI/TABLET:** DO NOT READ OUT

Q46. The average annual electricity distribution charge for a household in the north of Scotland is £122. The charge for a household in the South of Scotland with the same electricity usage is £95. The difference in the level of the charge is because the electricity network in the north of Scotland is more expensive per household to run than in the South, so the charge per household is higher.

[IMAGE OF MAP OF SCOTLAND AND NETWORK AREAS AND AVERAGE CHARGES FOR EACH)

To what extent do you think that it is fair that households in the south of Scotland pay less in electricity network charges than households in the North of Scotland? **ROTATE ORDER**

Completely fair
Somewhat fair
Somewhat unfair
Completely unfair
Don't know

Classification Questions

In this last section, there are some short classification questions which will help us to analyse the answers you have given.

Q47. Do you have a smart meter? A smart meter sends your energy supplier meter readings automatically and it also has a display device which shows you how much energy you are using in near real time. **SINGLE CODE**

IF Q1 Error! Reference source not found.**=2 OR Q2=2 OR Q1=3 OR Q2=3** Yes – for electricity only
IF Q1=3 OR Q2=1 OR Q2=3 Yes – for gas only
IF Q1=3 OR Q2=3 Yes - both
No
Unsure
Prefer not to answer

Q48. Which of the following best describes your household? If you spend time living in more than one household, please think about the household in which you spend most time living.

CAPI/TABLET: PLEASE READ OUT

Detached house or bungalow

Semi-detached house or bungalow
Terraced house or bungalow
Flat, maisonette or apartment
A caravan, mobile home or a houseboat
Other

Q49. Which of the following best describes the status of your home? If you spend time living in more than one household, please think about the household in which you spend most time living.

CAPI/TABLET: PLEASE READ OUT

Being bought on a mortgage
Owned outright by household
Rented from Local Authority
Rented from private landlord
Rented from Housing Association
Other

Q50. Thinking about all the people in your household, including yourself, please indicate how many people there are in each of these age groups. If you spend time living in more than one household, please think about the household in which you spend most time living: **DO NOT ALLOW '0' RESPONSE TO ALL 5. DP BUILD UP ROW BY ROW, ONLY SHOW NEW ROW WHEN THE PREVIOUS ONE HAS BEEN TICKED**

If there is no one in your household in a particular age group shown, please click on "0".

0-4 years	0	1	2	3	4	5+	Don't know Refused
5-15 years	0	1	2	3	4	5+	Don't know Refused
16 to 60 years	0	1	2	3	4	5+	Don't know Refused
61-74	0	1	2	3	4	5+	Don't know Refused
75+	0	1	2	3	4	5+	Don't know Refused

Q51. Does your household have any of the following?

CAPI/TABLET: PLEASE READ OUT

An electric vehicle
Solar panels or other forms of renewable energy generation (eg wind turbine, ground source heat pump)
Neither
Don't know **CAPI/TABLET:** DO NOT READ OUT

Q52. **SHOW IF ONLINE**: Which, if any, of these educational qualifications do you have? Please only include qualifications you have completed, do not include those you are still studying for. **SHOW IF CAPI**: Please could you look at this card and tell me which, if any, of these educational qualifications you have. **MULTI CODE**

CAPI/TABLET: PLEASE SHOW SCREEN

School Leaving Certificate, NQ Unit
O Grade, Standard Grade, GCSE, GCE O level, CSE, NQ Access 3 Cluster, Intermediate 1, Intermediate 2, Senior Certificate or equivalent
GNVQ/GSVQ Foundation or Intermediate, SVQ Level 1, SVQ Level 2, SCOTVEC/National Certificate Module, City and Guilds Craft, RSA Diploma or equivalent
Higher Grade, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent

GNVQ/GSVQ Advanced, SVQ Level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft, RSA advanced Diploma or equivalent
HNC, HND, SVQ Level 4, RSA Higher Diploma or equivalent
First Degree, Higher degree, SVQ Level 5 or equivalent
Professional qualifications e.g. teaching, accountancy
No qualifications
Don't know **(SINGLE CODE)**
Other school qualifications not already mentioned
Other post-school but pre-Higher Education qualifications not already mentioned
Other higher education qualifications not already mentioned [1/0]
FACE-TO-FACE: Prefer not to say

Q53. **SHOW IF ONLINE** What is your annual household income before tax and other deductions? If you spend time living in more than one household, please think about the household in which you spend most time living. **SHOW IF CAPI/TABLET:** Can you please select, from the following list of options, what your annual household income is, before tax and other deductions? **SHOW IF CAPI/TABLET DO NOT READ OUT. PLEASE HAND THE TABLET TO THE PARTICIPANT AND LET THEM ENTER THE FIGURE. ASK THEM TO PRESS FORWARD BEFORE HANDING IT BACK TO YOU. YOU SHOULD THEN SEE Q56 DISPLAYED ON THE SCREEN**

Less than £5,000
£5,000- £9,999
£10,000 - £15,999
£16,000 - £19,999
£20,000 - £24,999
£25,000 - £29,999
£30,000 - £34,999
£35,000 - £44,999
£45,000 - £59,999
£60,000- £79,999
£80,000 or over
Unsure
Prefer not to say

Q54. Please can you tell us if you or anyone else in your household receive any of the following benefits? If you spend time living in more than one household, please think about the household in which you spend most time living. **MULTICODE**

CAPI/TABLET: PLEASE READ OUT

Attendance Allowance
Carer's Allowance
Child Tax Credit
Council Tax Benefit
Disability Living Allowance/PIP
Housing Benefit
Income Support (or similar)
Jobseeker's Allowance
Pension Credit
Universal Credit
Working tax credit
None of these
FACE-TO-FACE: Prefer not to say **DO NOT READ OUT**

Q55. Which one of the following statements best describes your situation with paying your energy bill?

CAPI/TABLET: PLEASE READ OUT

I / we pay our energy bills without any difficulties
I / we pay our energy bills, but it is a struggle from time to time
I / we pay our energy bills, but it is a constant struggle
I / we sometimes fall behind with our energy bills
I am / we are having real financial problems and often fall behind with our energy bills
Don't know **CAPI/TABLET:** DO NOT READ OUT

Q56. Do you, or any other members of your household, have any long-term illness, physical or mental health problem or disability which limits your daily activities or the work you or they can do? This includes problems due to old age. If you spend time living in more than one household, please think about the household in which you spend most time living. **CODES 1 AND 2 MULTICODE. OTHERS SINGLE CODE**

Yes – I do
Yes – another household member does
No
Unsure
Prefer not to answer

Q57. We really appreciate the time that you have given us today. Would you be willing to be contacted again for clarification purposes or be invited to take part in other research for Citizens Advice Scotland?

Yes, for both clarification and further research
Yes, for clarification only
Yes, for further research only
No

SHOW IF ONLINE: Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential. **Please press the forward button to go to the last screen.**

SHOW IF TABLET/CAPI: Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential. If you would like to confirm my credentials or those of Accent, please call the MRS free on 0800 975 9596.

HAND OVER THE THANK YOU SLIP.

Please can I take a note of your name and where we can contact you for quality control purposes?
Name:
Telephone:

HAND OVER THE INCENTIVE If you have any queries about your incentive please contact us on 020 8742 2211. Thank you.

Interviewer Confirmation

I confirm that this interview was conducted under the terms of the MRS code of conduct and is completely confidential

Yes
No

SYSTEM INFORMATION
Time interview completed: