Consumer Expectations of DNOs and WTP for Improvements in Service

Report

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Executive Summary

- Research was conducted to determine business and domestic electricity consumers' experience and satisfaction with the service received from the electricity distribution companies, their priorities for improvement in quality of service and standards, and their willingness to pay for improvements.

- Research comprised 2118 face-to-face domestic interviews and 1965 telephone business interviews both using a computer assisted stated preference method. Interviews covered all DNO areas, and were weighted to reflect DNO profiles of age, socio-economic group (SEG), rural and urban location and experience of cuts (domestic) and company size and experience of cuts (business). Total samples were weighted to represent the relative size of each DNO based on consumer numbers.

- The majority of urban domestic consumers say they have not experienced an unplanned power cut during the last year, while the majority of rural domestic consumers say they have done so. Typically consumers claim to experience only one or two cuts per year. Smaller businesses are more likely to say they experience more frequent and longer outages than large ones. Planned power cuts are perceived to be rare.

- Awareness of the current standards and targets is very low, yet both domestic and business consumers have high expectations in terms of quality of service. They expect rapid restoration of power, even after a major storm, and look for compensation after limited numbers of cuts per year or after a relatively short outage duration. Business consumers have particularly high expectations.

- A high proportion of domestic consumers do not contact their distributor during a power cut but those who do tend to find it easy to get through and to get the information they want. Business consumers are much more likely to contact their distributor, but their experience is also largely satisfactory.

- The survey used a form of conjoint analysis, stated preference, to identify the priorities that both sets of consumers would have for changes to the service. This approach was also used to identify consumer Willingness To Pay (WTP) for improvements in service explored during the survey, and Willingness to Accept (WTA) degradation in some service aspects. The context for this was that the existing service levels would be provided at current costs (there would be no need for extra investment cost to maintain existing service levels) and that their WTP was being identified within a context where all other prices (e.g. the fuel supply costs themselves or the cost of other utilities) were presumed to be held constant at current prices.

- A high priority for both business and domestic consumers is improving maximum restoration times following major storms. Domestic consumers are willing to pay £22 a year for improvement in maximum restoration times from the current level of 48 hours to 24 hours, business consumers are willing to pay 4.9%; an improvement to 36 hours is also valued, but less highly, and an increase in maximum restoration times to 60 hours would be negatively valued.

- Significant improvements in network resilience are valued by some consumers but not others; however, a major step change in network resilience such as major cuts being reduced to once every five years rather than once a year would be highly valued though less so than improving restoration times.

- Another high priority for domestic consumers is to ensure that they receive accurate information during a power cut. Willingness to pay to ensure that information is updated every two hours to ensure accuracy is £22, or 6% of their total bill, for this improvement. It is likely, however, that this value will have been 'enhanced' as a result of the implicit assumption in the evaluation that if it is not updated in this way the information they are given will not necessarily be accurate. There is no identified willingness to pay for a callback service (except for LPN). Domestic consumers show some altruism in being prepared to pay an additional 3% for a helpline for consumers medically dependent on electrical equipment.

- Consumers are prepared to pay for reductions in frequency of cuts, but only in their own areas. Both rural and urban consumers are prepared to pay about £20 to avoid a cut in the area relevant to them, but nothing towards reducing cuts elsewhere. Businesses place higher value on reducing urban cuts than rural cuts; only smaller companies value a reduction in rural cuts

- Most business consumers do not require improvements in information; only small companies show interest in a callback service, and there is no value given to a dedicated business helpline.

- Domestic and business consumers also value a reduction in the duration of power cuts. For domestic consumers, a reduction in the average length of cuts of 20 minutes would be valued at an equivalent level to the other two main priorities, improving restoration times to 24 hours or improving the accuracy of information. For business consumers the priority is not as high; such an improvement (ie 20 minutes) is valued at 2.8%, slightly less than reducing the number of urban cuts by one.

- Domestic consumers are not prepared to pay more for improvements to the multiple interruption standard. Companies are currently required to pay consumers £50 compensation if they experience four or more cuts longer than three hours. However, consumers expect a reduction in their total bills if the trigger for compensation is relaxed to five cuts longer than three hours; a discount of £21, or 5.7% of the bill, would be required in this case. Domestic consumers also see no value in implementing automatic compensation payments for only the 18 hour standard, but automatic compensation for all standards does have some value attached (£5, 1.5% of total bill).

- Businesses, in contrast, see some value in tightening the standard to three cuts or more (1.2%), but do not expect a reduction in their bill if the standard is relaxed to 5 cuts. Of a number of different levels of compensation improvements tested, only the highest level, comprising automatic compensation on a 14 hour standard with amounts linked to bill size, is valued at all, and even then only marginally by small companies (less than 1% of their total bill). In general, business consumers comment that compensation amounts are not adequate to make up for the business losses caused by power cuts.

- Both rural and urban residents are prepared to pay towards undergrounding of the network in national parks and areas of outstanding natural beauty. For each percent of the network undergrounded per year, consumers are prepared to pay about £2.50 per year, or 0.7% of the total bill.

1. INTRODUCTION

1.1 Background

OFGEM was formed in 1999 with the principal objective of protecting the interests of gas and electricity consumers in England, Wales and Scotland. Its objectives are to ensure both domestic and business consumers are afforded protection not only in terms of the price they pay but also the quality of service they receive from Distribution Network Operators (DNOs). The existing regulatory framework provides such protection in terms of quality of service through two main mechanisms:

- Guaranteed and Overall Standards of Performance (GOSPs) and;
- A quality of service incentive scheme under the Information and Incentives Project (IIP).

As part of the distribution price control review OFGEM is reviewing the existing quality of service arrangements to ensure that DNOs continue to be provided with appropriate incentives to deliver a good quality of service to consumers.

In order to support this work, OFGEM commissioned a research study to provide a detailed understanding of which aspects of service are valued by consumers, the relative priorities placed on different outputs and consumers' willingness to pay for improvements in service.

The study comprised a qualitative phase and two quantitative phases. This report details the findings from the second quantitative phase conducted in March and April 2004.

1.2 Objectives

Overall Objectives

The outputs from this study as a whole are designed to inform the following:

- The areas which will be financially incentivised (or in which additional reporting requirements will be introduced);
- Target setting;
- Incentive rates; and
- Compensation payments under the GOSPs.

Specific Objectives

The research is specifically required to provide an understanding of:

- Consumer experience and satisfaction with the quality of service they receive;

- Areas of quality of service, environmental and social outputs that consumers value and their relative priorities among these;

- Consumer awareness of the GOSPs, their views on improvements or extensions to the GOSPs, their relative priorities and their willingness to pay for such changes;

- Consumer expectations of average levels of quality of service, their relative priorities among potential improvements in different aspects of quality and their willingness to pay for improvements;

- Consumer expectations regarding the resilience of their power supply to bad weather or other exceptional events and willingness to pay for improvements in this area;

- Consumer views on variations in quality of service delivered in different geographical area and all consumers' willingness to pay for improvements in service to worst-served consumers or consumers in rural areas; and

- Consumer views on the benefits of undergrounding parts of DNOs networks and their willingness to pay for a programme of selective undergrounding.

2. METHODOLOGY

2.1 Introduction

The research comprised stated preference interviews with both domestic and business consumers across England, Wales and Scotland. Stated preference is a research technique also known as 'trade-off' or conjoint research. It is a method of obtaining relative importance and willingness to pay for changes in service.

The basis of the technique is the concept of utility. Utility theory postulates that each good, service, or activity conveys a benefit to the consumer; he or she (in purchase behaviour or choice of activities) seeks to maximise that benefit and will make choices that do so.

The utility of a product or service is seen to be the sum of utilities of the features of that product/service. Each of these factors, or attributes, conveys a benefit to the purchaser (or disbenefit, in the case of price).

When making their choices people 'trade off' the bundle of utilities of one alternative with the other. They then choose the one that conveys the highest net utility.

Stated preference techniques seek to measure the utility associated with a product or service and to derive the part-utilities associated with each attribute of the service.

The measurement of utilities through stated preference techniques is undertaken in an experiment or exercise that forms the major part of the interview. They are offered a series of choices between two packages, each of which describes the service in terms of the attributes for which measurement is required.

Respondents are asked to make a choice between one of the two packages in each pair. The way in which the packages are designed conform to a statistical design and may therefore be analysed. Logit analysis is used.

The output of the analysis is a utility function (or model) comprised of utility weights for the attributes being examined. The weights show the relative preferences for each attribute and the strength of those preferences. Where cost is included, as in this case, its utility weight can be used to derive a willingness to pay for other attributes.

2.2 Domestic

The fieldwork was undertaken between 9 February 2004 and 29 March 2004. The interviews were conducted in the respondents' homes, using a laptop computer. Interviews lasted 20-25 minutes on average and respondents received a £5 Boots voucher as incentive for taking part.

Sample

- The target for the total sample was 2100 interviews, 150 within each of the 14 DNO areas. Within each DNO area minimum targets were set by age, in three

categories (16-29 years, 30-49 years, and 50 and above), socio-economic groups (SEG) and previous experience of cuts.

Socio-economic groups (SEG) are a standard method of classifying households. They are defined by asking a standard classification question as follows:

"What is the occupation of the head of your household?"

Respondents are then classified accordingly using a comprehensive glossary. Broad definitions are as follows:

- ABs:
  - These represent approximately 17% of the total population
  - Group A includes: professional people; very senior managers in business or commerce; top civil servants; retired people who were previously one of the foregoing and their widow/widowers. Group B includes: middle management executives in large organisations; principal officers in local government or the civil service; top management or owners of small business concerns, educational and service establishments; and retired people who were previously in group B and their widow/widowers
- C1C2s:
  - These represent approximately 51% of the total population
  - C1 includes: junior management; owners of small establishments; all others in non-manual positions; retired people who were previously in the C1 group and their widow/widowers. C2 includes: all skilled manual workers; manual workers with responsibility for other people; retired people who were previously in the C2 group if receiving pensions from their job; widows/widowers of those in C2 if receiving pensions from their late spouse's job
- DEs:
  - These represent approximately 32% of the population
  - D includes: all semi-skilled and unskilled manual workers; apprentices and trainees to skilled workers; retired people previously in group D with pensions from their job; widows/widowers of those in D if receiving pension from their spouse's job. E includes: those entirely dependent on the state long-term through sickness, unemployment, old age or other reasons; those unemployed for a period exceeding six months; casual workers and those without a regular income.

A quota was also set on type of location (urban/rural), except for the EDF Energy Networks (LPN) area, which does not include any rural locations, to ensure adequate representation of all groups in the sample.

As interviews were to be conducted in the home, a cluster sampling method was used. Within each of the 14 DNO areas, between 12 and 20 sampling points were selected. The sampling points were selected by allocating the postcodes in the DNOs' area to either the rural or the urban category, and then selecting postcodes at random from each list to make up the number of sampling points required. Interviewers then recruited respondents house to house within the postcode, approaching every third address, and recruiting on the doorstep using a short questionnaire to identify the decision-maker and to determine whether they fell within the required quotas for the study. Those agreeing to take part were then interviewed at that time or at a further appointment.

In total, 2118 interviews were conducted with domestic consumers.

For each DNO area except EDF Energy Networks (LPN) the targets set were as follows:

Table 1:Domestic Quotas

	Urban Number of interviews	**Rural Number of interviews**
Experience of Cuts	Minimum 37	Minimum 37
No Experience	No quota	No quota
16-29 years	Minimum 9	Minimum 23
30-49	Minimum 14	
50+	Minimum 16	Minimum 16
AB	Minimum 10	Minimum 10
C1C2	Minimum 20	Minimum 20
DE	Minimum 11	Minimum 11
Total	75	75

For EDF Energy Networks (LPN) the targets were:

Table 2: EDF Energy Networks (LPN) Domestic Quota

	Urban
Experience of Cuts	Minimum 75
No Experience	No quota
16-29 years	Minimum 18
30-49	Minimum 28
50+	Minimum 32
AB	Minimum 20
C1C2	Minimum 40
DE	Minimum 22
Total	150

Interviews achieved were as follows:

Table 3: Domestic Interview Numbers Achieved

	Location		Exp Cuts		Age			SEG			Total
DNO	Rural	Urban	Cuts	No Cuts	16-29	30-49	50+	AB	C1C2	DE	
Central Networks (West)	77	74	98	53	37	56	58	33	68	50	151
EDF Energy Networks (EPN)	75	76	82	69	17	64	70	37	72	42	151
Central Networks (East)	76	74	89	61	17	75	58	38	73	39	150
SP Manweb	63	89	53	99	28	67	57	31	60	61	152
NEDL	75	75	71	79	26	67	57	21	52	77	150
Scottish Hydro Electric	76	72	67	81	19	69	60	27	81	39	148
Scottish Power	82	70	83	69	28	63	61	41	64	47	152
Southern Electric	77	73	108	42	22	79	49	36	69	44	150
EDF Energy Networks (SPN)	75	75	80	70	13	50	86	30	71	49	150
United Utilities	76	74	86	64	18	80	52	30	78	42	150
WPD (South Wales)	78	86	76	88	30	68	64	32	70	61	162
WPD (South West)	74	75	95	54	19	71	59	33	69	46	149
YEDL	74	75	58	91	31	60	58	26	71	50	149
EDF Energy Networks (LPN)	0	154	59	95	52	74	28	19	72	62	154
Total	978	1142	1105	1015	344	924	817	434	970	709	2118

Domestic Weighting Process

The data were weighted by age, SEG, urban/rural location and experience of cuts in the past year to reflect the profile of each DNO, and then by consumer numbers for each DNO. The total weighted sample is therefore reflective of the relative number and profile of consumers for each DNO area.

The sources of the weighting information were:

- Urban versus rural households by each DNO, from figures provided by individual DNOs;
- Number of households experiencing interruptions by each DNO, from figures estimated by Ofgem;
- SEG segmentation taken from the BARB Establishment survey 1997 (where regions are defined by ITV areas);
- Age segmentation taken from the Census 2001; and
- Relative size of each DNO determined from consumer numbers provided by Ofgem.

The variables used in the weighting are not interlocking; that is to say, while we know, for example, what percentage of households in a DNO are in each age group, and we know what percentage of households in a DNO experience cuts, we do not have the information on what percentage of households in each age group experience cuts as compared to the other groups. This means that rim weighting is required, where the

sample is weighted by each variable in turn. After the first weight is applied, the data set accurately reflects the distribution of that variable. When the data set is weighted by the second variable, however, the first variable may no longer match the targets. As each subsequent weight is applied, the earlier variables may differ more from the targets.
After passing through all the variables, we have a set of weights that will match the target on the last variable but not necessarily on the other variables.

After a series of iterations and changing the order of the variables, the following solution was reached minimising the difference between the target and actual values for each variable. The tables below show the weighted distributions and the targets. SEG was the first variable used.

Table 4: Weighted SEG Breakdown

ITV Area	DNO	ABs (%)	C1C2 (%)	DE (%)
London	EDF Energy Networks (LPN)	20	44	35
Midlands	Central Networks (East) & Central Networks (West)	16	48	36
North West	United Utilities	13	43	44
Yorkshire	YEDL	15	44	39
Central Scotland & Border	ScottishPower	13	45	42
Wales & West	SP Manweb & WPD (South Wales)	17	47	36
South & South East	Southern & EDF Energy Networks (SPN)	21	52	27
North East	NEDL	15	40	45
East	EDF Energy Networks (EPN)	16	52	33
South West	WPD (South West)	16	53	30
North Scotland	Scottish Hydro Electric	18	44	37

On this and subsequent tables please note that the figures may not sum to 100% due to rounding.

Table 5: Target SEG Breakdown: taken from BARB Establishment

ITV Area	DNO	AB(%)	C1C2 (%)	DE (%)
London	EDF Energy Networks (LPN)	23	47	30
Midlands	Central Networks (East) & Central Networks (West)	16	49	35
North West	United Utilities	17	45	38
Yorkshire	YEDL	14	48	39
Central Scotland & Border	ScottishPower	15	45	39
Wales & West	SP Manweb & WPD (South Wales)	18	47	36
South & South East	Southern & EDF Energy Networks (SPN)	23	50	27
North East	NEDL	15	43	43
East	EDF Energy Networks (EPN)	18	51	31
South West	WPD (South West)	18	54	29
North Scotland	Scottish Hydro Electric	18	46	36

Age was the second variable used.

Table 6: Weighted Age Breakdown

Census Area	DNO	16-29 (%)	30-49 (%)	50+ (%)
North West	United Utilities	23	35	43
North East	NEDL	24	39	37
Yorkshire and the Humber	YEDL	25	37	38
East Midland	Central Networks (East)	22	34	44
West Midlands	Central Networks (West)	22	36	42
East of England	EDF Energy Networks (EPN)	24	35	42
London	EDF Energy Networks (LPN)	30	42	27
South East	EDF Energy Networks (SPN) & Southern	23	37	39
South West	WPD (South West)	20	35	45
Wales	WPD (South Wales) & SP Manweb	23	37	40
Scotland	Scottish Power & Scottish Hydro Electric	24	35	40

Table 7: Target Age Breakdown as in Census 2001

Census Area	DNO	16-29 (%)	30-49 (%)	50+ (%)
North West	United Utilities	22	36	43
North East	NEDL	21	36	43
Yorkshire and the Humber	YEDL	22	36	42
East Midland	Central Networks (East)	21	36	43
West Midlands	Central Networks (West)	22	36	43
East of England	EDF Energy Networks (EPN)	21	36	43
London	EDF Energy Networks (LPN)	27	39	33
South East	EDF Energy Networks (SPN) & Southern	21	36	43
South West	WPD (South West)	20	34	46
Wales	WPD (South Wales) & SP Manweb	21	34	45
Scotland	Scottish Power & Scottish Hydro Electric	22	37	42

The third variable to be used in the rim weighting was the rural versus urban split.

Table 8: Weighted Rural/Urban Breakdown

DNO	Rural (%)	Urban (%)
Central Networks (West)	45	55
EDF Energy Networks (EPN)	29	71
Central Networks (East)	45	55
SP Manweb	32	68
NEDL	32	68
Scottish Hydro Electric	65	35
Scottish Power	52	48
Southern Electric	39	61
EDF Energy Networks (SPN)	32	68
United Utilities	30	70
WPD (South Wales)	31	69
WPD (South West)	57	43
YEDL	32	68
EDF Energy Networks (LPN)	0	100

Table 9: Target Rural/Urban Breakdown

DNO	Rural (%)	Urban (%)
Central Networks (West)	52	48
EDF Energy Networks (EPN)	29	71
Central Networks (East)	48	52
SP Manweb	31	69
NEDL	28	72
Scottish Hydro Electric	65	35
Scottish Power	48	52
Southern Electric	44	56
EDF Energy Networks (SPN)	24	76
United Utilities	32	68
WPD (South Wales)	29	71
WPD (South West)	62	38
YEDL	31	69
EDF Energy Networks (LPN)	0	100

Q1 (question asking about unplanned power cuts) was the last but one variable used in the stepwise process.

Table 10: Weighted Data on % of consumers not interrupted

DNO	% not interrupted
Central Networks (West)	47
EDF Energy Networks (EPN)	46.5
Central Networks (East)	52
SP Manweb	73
NEDL	55
Scottish Hydro Electric	49
Scottish Power	62
Southern Electric	46
EDF Energy Networks (SPN)	47
United Utilities	56
WPD (South Wales)	51
WPD (South West)	49
YEDL	60
EDF Energy Networks (LPN)	75

Table 11: Target Data on % of consumers not interrupted

DNO	% not interrupted
Central Networks (West)	47
EDF Energy Networks (EPN)	46.5
Central Networks (East)	52
SP Manweb	73
NEDL	55
Scottish Hydro Electric	49
Scottish Power	62
Southern Electric	46
EDF Energy Networks (SPN)	47
United Utilities	56
WPD (South Wales)	51
WPD (South West)	49
YEDL	60
EDF Energy Networks (LPN)	75

The last step in the process was to weight each DNO to reflect relative consumer numbers.

Table 12: Weighted Domestic Sample Size by DNO

DNO	Consumer Number	Weighted Sample Size
Central Networks (West)	2,323,792	175
EDF Energy Networks (EPN)	3,415,372	257
Central Networks (East)	2,471,437	186
SP Manweb	1,468,457	110
NEDL	1,518,745	114
Scottish Hydro Electric	684,124	51
Scottish Power	1,962,975	147
Southern Electric	2,760,987	207
EDF Energy Networks (SPN)	2,168,231	163
United Utilities	2,279,297	171
WPD (South Wales)	1,076,287	81
WPD (South West)	1,466,838	110
YEDL	2,171,755	163
EDF Energy Networks (LPN)	2,255,232	169

Domestic Questionnaire and Stated Preference Exercises

The recruitment questionnaires, main questionnaires and stated preference show materials can be found in the Appendices.

The questionnaire included some background questions on electricity consumption and experience of cuts, and attitudinal questions about consumers' expectations in terms of quality of service and service standards. Awareness of the service standards was also measured. The main part of the interview was a series of stated preference exercises designed to obtain consumers' priorities between, and willingness to pay for, the following potential changes in service:

- an increase or decrease in the number of power cuts in rural areas over 5 years: up to 3 more or fewer cuts than the DNO's current average;
- an increase or decrease in the number of power cuts in urban areas over 5 years: up to 3 more or fewer cuts than the DNO's current average;
- longer or shorter average power cut durations: up to 20 minutes longer or shorter than the DNO's current average;
- improvement in the resilience of the network: chance of 1% of consumers having a 24hr + outage following a major storm currently once per year, improvement to once every 2 years or once every 5 years;
- maximum time to restore consumers after a major storm decreasing to 24 hours or 36 hours compared to current (48 hrs) or increasing to 60 hours;
- consumers entitled to compensation after 3 (fewer) or 5 (more) unplanned cuts of over 3 hours. The standard is currently set at four unplanned cuts;

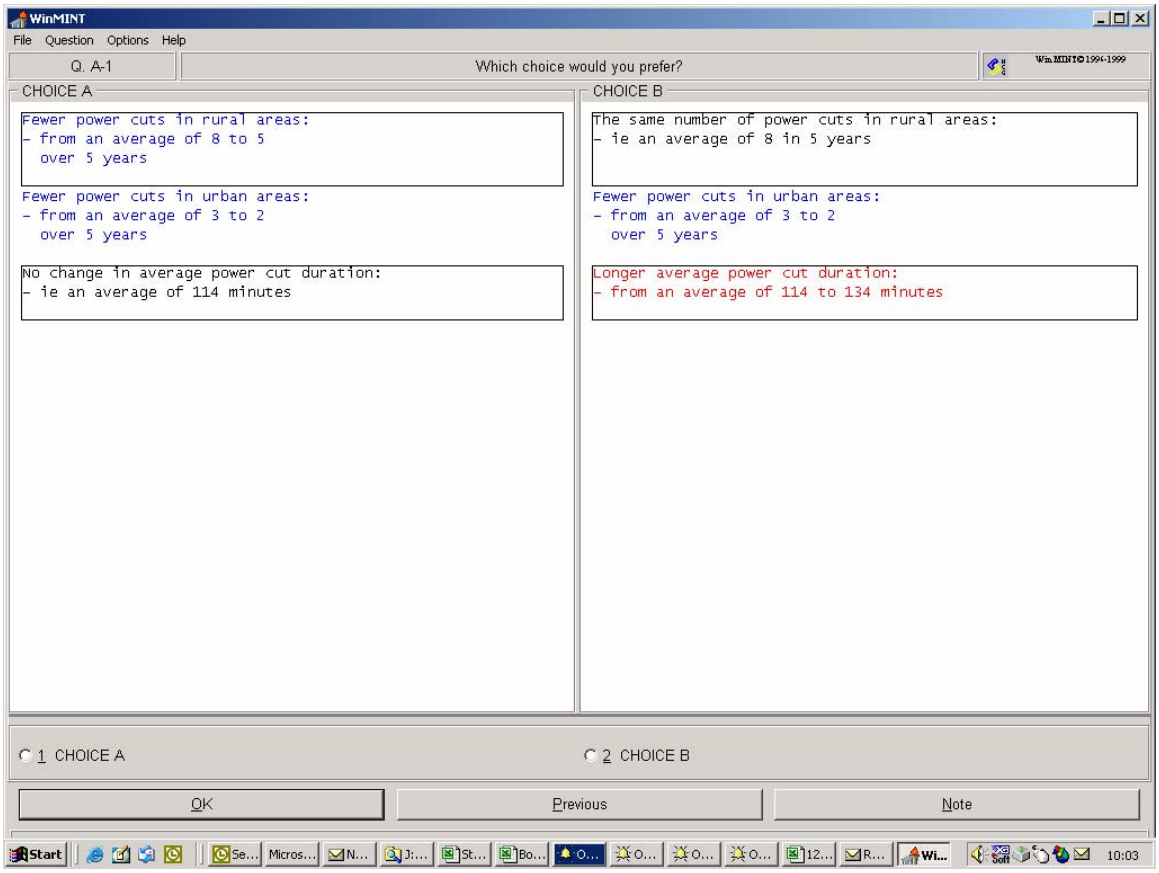
- compensation provided automatically rather than having to be claimed: for the 18hr interruption standard only, or for all standards;

- changes to the provision of information during a power cut: more frequent updating, call backs if required, and a special helpline for medically dependent consumers; and

- a commitment to undergrounding up to 7.5% of the network per year on an ongoing basis in national parks and areas of outstanding natural beauty to reduce visual impact.

These variables were arranged in a series of four stated preference exercises. Each exercise involves a series of six to eight pairwise choices, in each of which the respondent chooses his or her preferred package of improvements from a choice of two. Three variables were included in each of the first three exercises, and the final exercise traded bundles of improvements with changes in the size of the bill. This provides the monetary values and overall priorities between all the changes tested.

An example of pairwise choice is shown below.



In the EDF Energy Networks (LPN) area, which does not include any rural locations, a separate design was used which excluded variables not relevant to the EDF Energy Networks (LPN) area. The variables tested in the EDF Energy Networks (LPN) area were:

- an increase or decrease in the number of power cuts in urban areas over 5 years: up to 3 more or fewer cuts than the EDF Energy Networks (LPN) current average;

- longer or shorter average power cut durations: up to 20 minutes longer or shorter than the EDF Energy Networks (LPN) current average;

- consumers entitled to compensation after fewer or more unplanned cuts than now;

- compensation provided automatically rather than having to be claimed: for the 18hr interruption standard only, or for all standards;

- changes to the provision of information during a power cut: more frequent updating, call backs if required, and a special helpline for medically dependent consumers; and

- a commitment to undergrounding of the network to reduce visual impact.

As fewer variables were tested, the EDF Energy Networks (LPN) consumers took part in only three exercises.

2.3 Business

The fieldwork was carried out between 26 February 2004 and 6 May 2004. Interviews were conducted by telephone from Accent's dedicated telephone units based in Bristol and Edinburgh using a computer-assisted interview. Interviews lasted 24 minutes on average. There was no incentive for taking part.

Sample

The target for the total sample was 2100 interviews, 150 within each of the 14 DNO areas. Within each DNO area minimum targets were set by size, measured by maximum demand or bill size, in three categories: large (over 1MW or £159,000 annual bill); medium (over 100kW or £15,000 per year); and small. This was to ensure adequate representation of all groups in the sample. A quota was also set on experience of power cuts.

The sample source was purchased from Sample Sources' the UK Biz database, based on the Experian National Business Database, the standard list of just under 2m UK businesses. The list was divided into strata according to size by number of employees. These strata were intended broadly to approximate to the size bands listed above, to assist in targeting. The list was also divided into regions. Companies were then selected at random from these lists for interview.

Respondents were recruited by telephone using a short recruitment questionnaire to identify the decision-maker for the organization, establish whether they were in-scope for the study and obtain agreement for the further interview. Respondents were then sent, by post, fax or email, the show material relating to the stated preference exercise choices, and contacted at a prearranged time for the further interview to take place. The

initial refusal rate was 22%. The conversion rate between recruitment and interview was 62%. This is typical for this type of survey.

In total, 1965 interviews were conducted with business consumers.

For each DNO area the targets set were as follows:

Table 13: Business Quotas

	Number of interviews
Experience of cuts	Minimum 75
Not experienced	No Quota
Large	25-50
Medium	40-70
Small	40-70
Total	150

Interviews achieved were as follows:

Table 14: Business Interviews Achieved

DNO	**Cuts**	**No Cuts**	**Large**	**Medium**	**Small**	**Total**
Central Networks (West)	77	62	20	51	68	139
EDF Energy Networks (EPN)	69	61	19	36	75	130
Central Networks (East)	68	73	10	38	93	141
SP Manweb	61	71	13	42	77	132
NEDL	68	70	21	39	78	138
Scottish Hydro Electric	63	75	7	30	101	138
Scottish Power	70	84	23	63	68	154
Southern Electric	78	67	21	64	60	145
EDF Energy Networks (SPN)	85	78	7	55	101	163
United Utilities	53	84	16	61	60	137
WPD (South Wales)	63	71	10	31	93	134
WPD (South West)	72	67	17	37	85	139
YEDL	63	73	18	46	72	136
EDF Energy Networks (LPN)	62	77	14	44	81	139

Business Weighting

The business data were weighted to match the experience of cuts within each DNO area, according to figures provided by each DNO area. The overall sample was then weighted by consumer numbers for each DNO so that the total weighted sample reflects the relative number of consumers. As these were the only variables used the weighted data reflects the targets perfectly.

Table 15: Weighted Data on % of consumers not interrupted

DNO	% not interrupted
Central Networks (West)	47
EDF Energy Networks (EPN)	46.5
Central Networks (East)	52
SP Manweb	73
NEDL	55
Scottish Hydro Electric	49
Scottish Power	62
Southern Electric	46
EDF Energy Networks (SPN)	47
United Utilities	56
WPD (South Wales)	51
WPD (South West)	49
YEDL	60
EDF Energy Networks (LPN)	75

Table 16: Weighted Business Sample Size by DNO

DNO	Consumer Number	Weighted Sample Size
Central Networks (West)	2,323,792	163
EDF Energy Networks (EPN)	3,415,372	239
Central Networks (East)	2,471,437	173
SP Manweb	1,468,457	103
NEDL	1,518,745	106
Scottish Hydro Electric	684,124	48
Scottish Power	1,962,975	138
Southern Electric	2,760,987	194
EDF Energy Networks (SPN)	2,168,231	152
United Utilities	2,279,297	160
WPD (South Wales)	1,076,287	75
WPD (South West)	1,466,838	103
YEDL	2,171,755	152
EDF Energy Networks (LPN)	2,255,232	158

Business Questionnaire and Stated Preference Exercises

The recruitment questionnaires, main questionnaires and stated preference show materials can be found in the Appendices.

The business questionnaire followed a very similar pattern to the domestic questionnaire. The stated preference exercises examined the following potential changes in service:

- an increase or decrease in the number of power cuts in rural areas over 5 years: up to 3 more or fewer cuts than the DNO's current average (not tested in the EDF Energy Networks (LPN) area);
- an increase or decrease in the number of power cuts in urban areas over 5 years: up to 3 more or fewer cuts than the DNO's current average;
- longer or shorter average power cut durations: up to 20 minutes longer or shorter than the DNO's current average;

- improvement in the resilience of the network: chance of 1% of consumers having a 24hr + outage following a major storm currently once per year, improvement to once every 2 years or once every 5 years (not EDF Energy Networks (LPN));

- maximum time to restore consumers after a major storm decreasing to 24 hours or 36 hours compared to current (48 hrs) or increasing to 60 hours (not EDF Energy Networks (LPN));

- consumers entitled to compensation after 3 (fewer) or 5 (more) unplanned cuts of over 3 hours. The standard currently requires compensation to be paid out after 4 cuts longer than 3 hours;

- changes to the compensation arrangements: compensation after 14hrs rather than 18; a higher level of compensation for larger businesses, based on a percentage of bill size; and a higher level with the addition that it would be automatically paid, rather than having to claim; and

- changes to the provision of information during a power cut: call backs if required, and a dedicated helpline for business consumers.

3. DOMESTIC CONSUMERS' EXPERIENCE AND ATTITUDES

Please note that numbers in tables and figures may not add to 100% due to rounding.

3.1 Bill Size

As part of the interview, consumers were asked to check their latest bill and estimate their annual bill size. The average bill size reported was £376. This is somewhat higher than the actual average domestic bill. The most likely reason for the high estimates is the timing of the fieldwork, immediately following the coldest quarter of the year. Although respondents were asked to take this into account, their estimates are likely to have been affected by this.

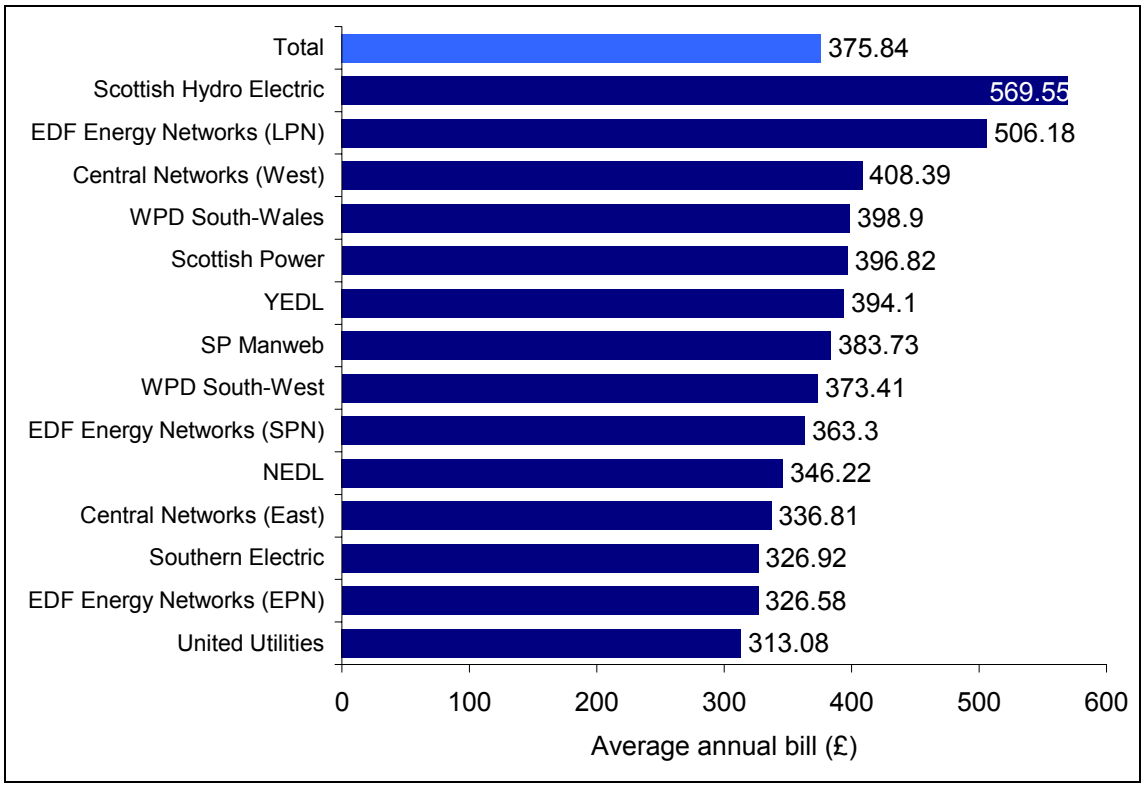


Figure 1: Average bill size

3.2 Experience of Cuts

The majority (60%) of domestic consumers in rural areas say they have experienced at least one power cut of more than 3 minutes in the last year, while a minority (38%) of urban consumers say they have experienced such a cut.

Frequent cuts are rare; most consumers say they have experienced only one or two in the past year. Rural consumers are more likely to report more frequent and longer power cuts than urban consumers.

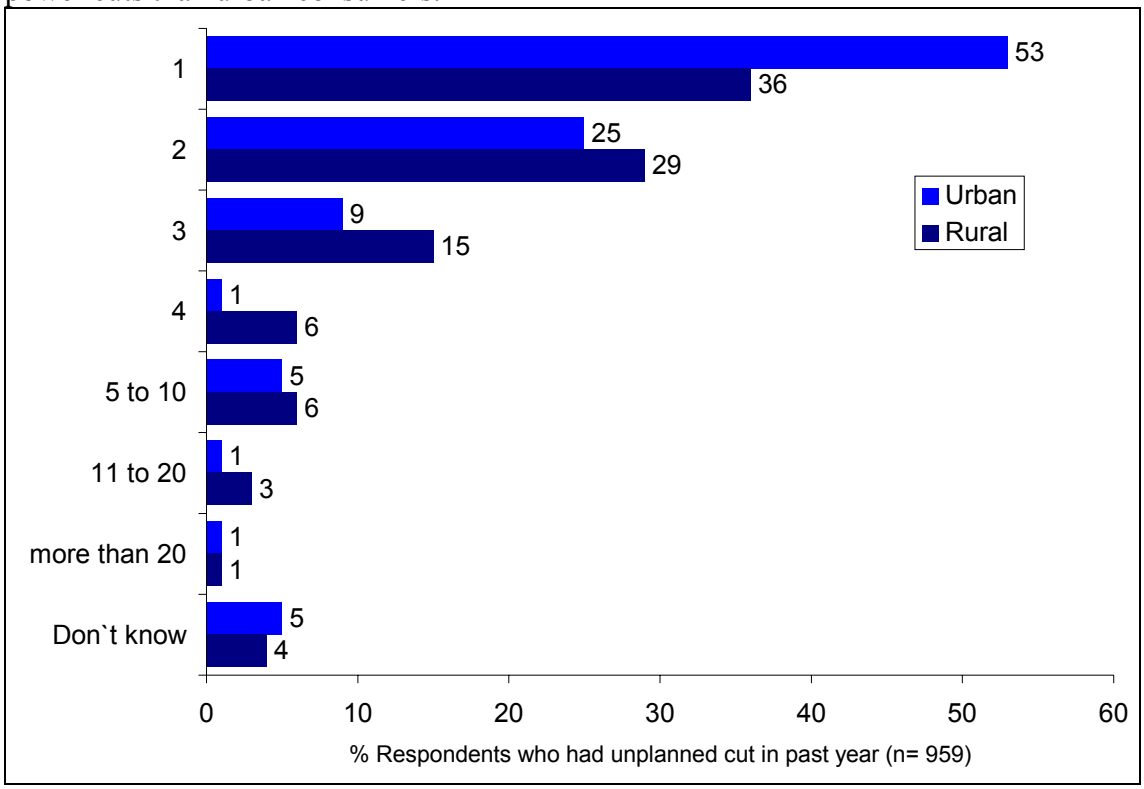


Figure 2: Frequency of unplanned cuts in past year

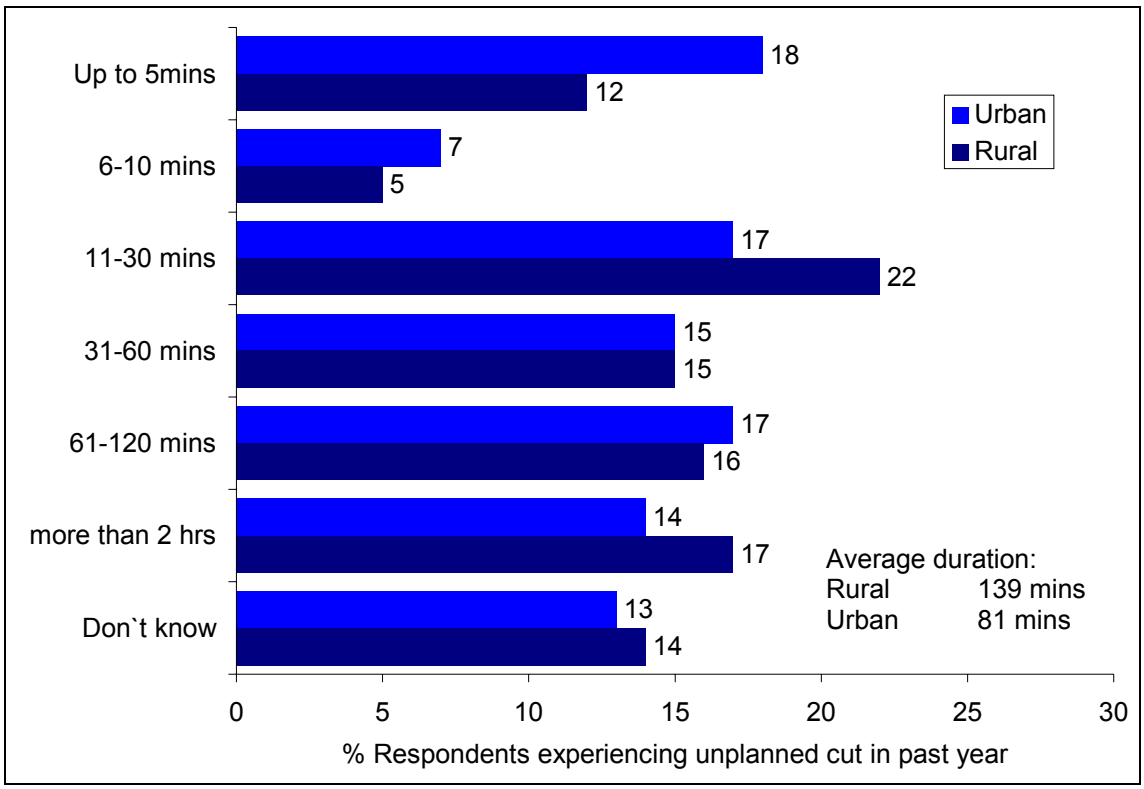


Figure 3: Length of most recent unplanned power cut

A very small proportion of consumers (8%) said they had experienced planned cuts in the past year. This typically occurred only once in the year, but these cuts were perceived to be longer on average than the unplanned cuts.

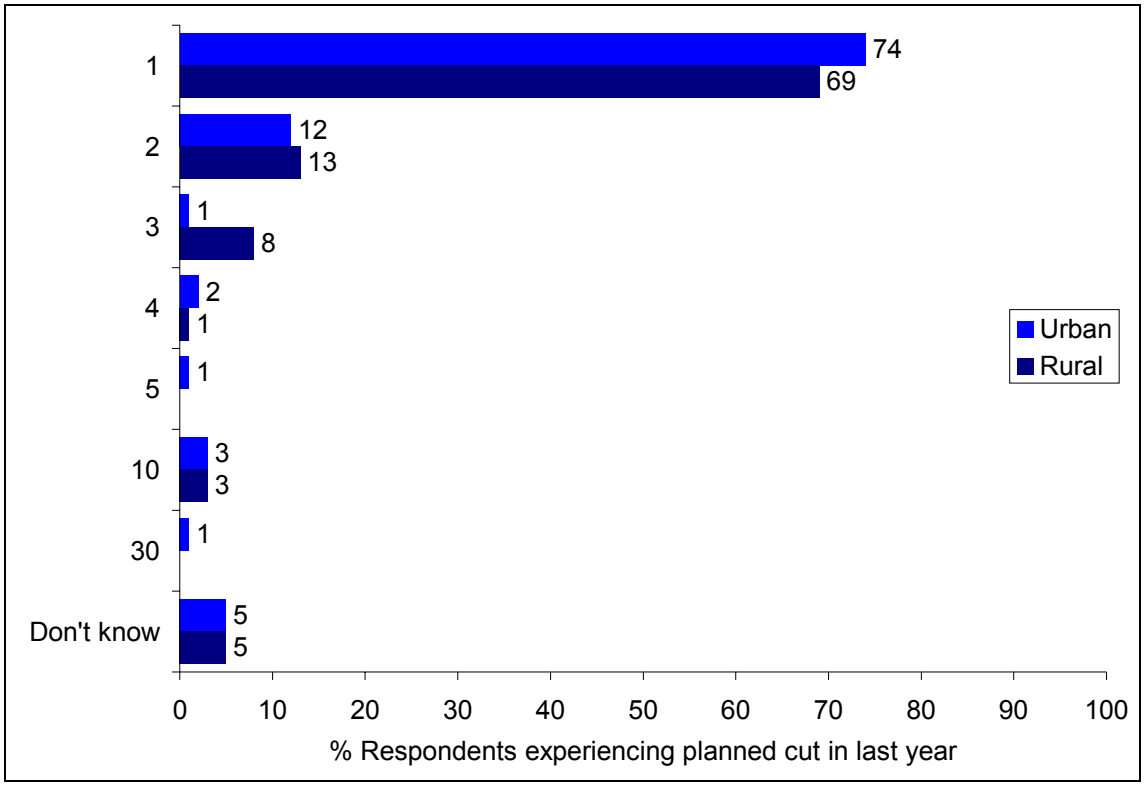


Figure 4: Number of planned cuts experienced in past year

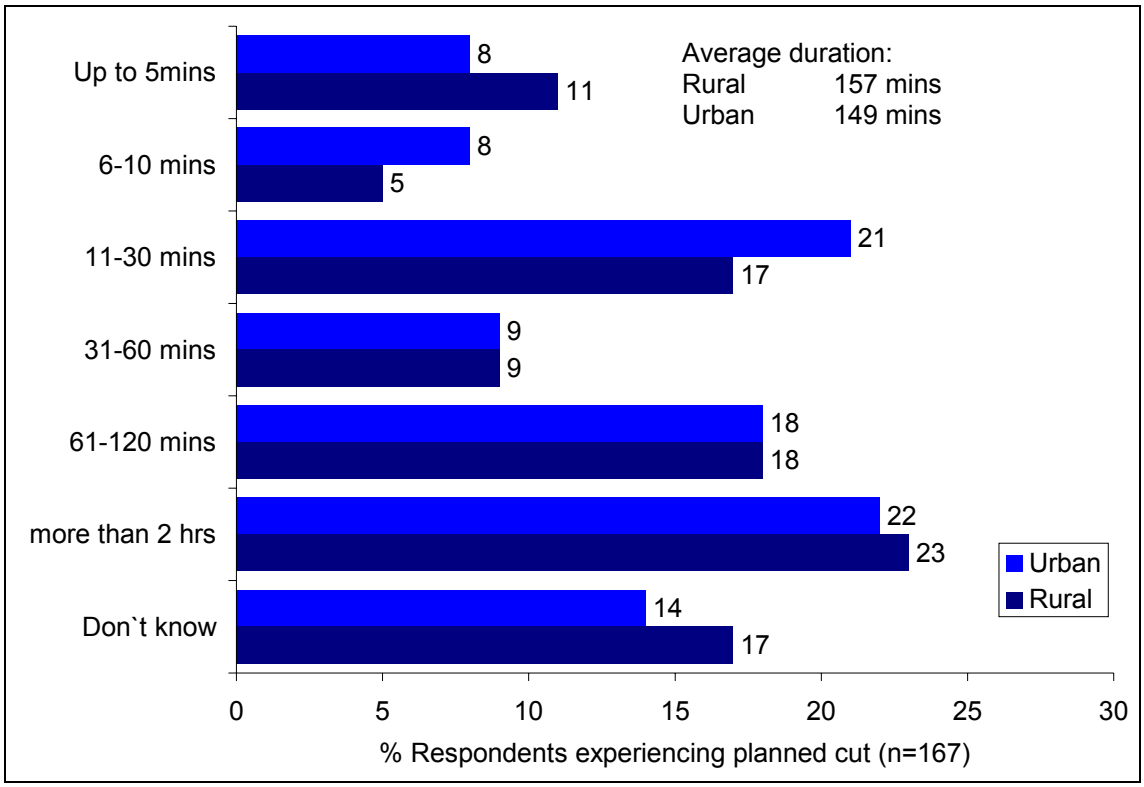


Figure 5: Length of most recent planned cut

3.3 Experience of Contacting Distributor During Power Cut

Most domestic consumers did not attempt to contact the distributor when they experienced an unplanned power cut. Of the 23% who did attempt to contact the distributor, four out of five (80%) were able to get through, and the time to get through was generally perceived as being short (55% got through in one minute or less).

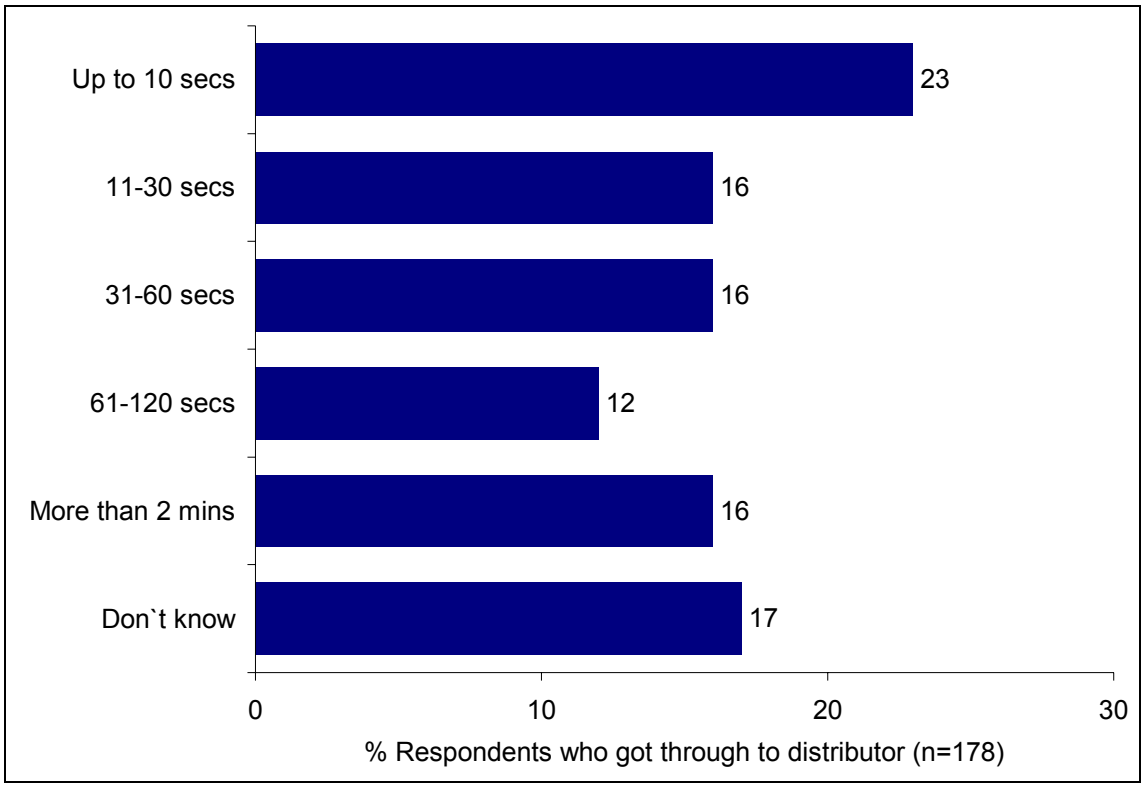


Figure 6: Time taken to get through to distributor

Those who did get through were evenly divided between those who received an automated response and those who spoke to someone. The small number of consumers who achieved contact with their distributor had a positive experience. The majority (79%) got the information they wanted and nine out of ten (89%) said the information they received was correct. Those who spoke to someone, rather than getting an automated message, were more likely to get the information they wanted and to say that it was correct.

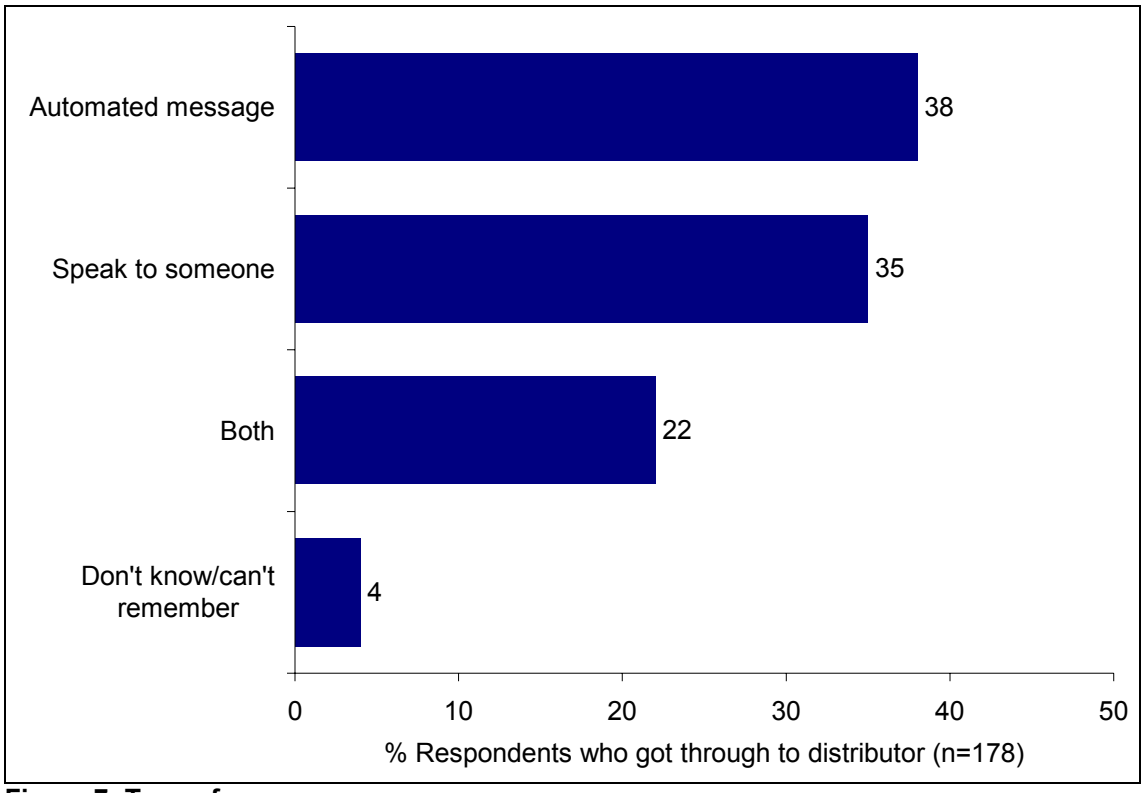


Figure 7: Type of response

Table 17: Quality of information by type of response

	Type of response			Total %
	Automated message %	Spoke to someone %	Both %	
Got the information they were looking for	72	86	87	79
Information was correct	80	99	77	89

3.4 Awareness of Standards and Targets

Awareness of the standards and targets currently in place is very low among domestic consumers. Less than 10% of consumers are aware of any of the standards or targets.

Table 18: Awareness of standards

Standard	% aware
Distributors should restore consumers' supplies within 18hrs following unplanned interruptions. Failure results in a penalty payment of £50 for domestic customers for the first 18 hours plus £25 for each additional 12 hours.	6
Consumers entitled to penalty payment of £50 if they have 4 or more power cuts each longer than 3 hrs in a single year.	3
Consumers must be given at least 2 days notice of planned power cut. Failure to do so results in a penalty payment of £20 for domestic customers.	7

3.5 Expectations of Quality of Service

Domestic consumers have high expectations regarding quality of service. Although most (82%) consumers believe it is reasonable for a power cut to occur in major storm, two thirds (69%) believe that distributors should be doing more to reduce the impact of severe weather on their networks. Consumers expect power to be restored quickly. Even after a major storm affecting 1% of the distributor's consumers, only 12% expect restoration to take 24 hours or more. Nearly half (46%) of consumers expect power to be restored in these circumstances within 3 hours, or less.

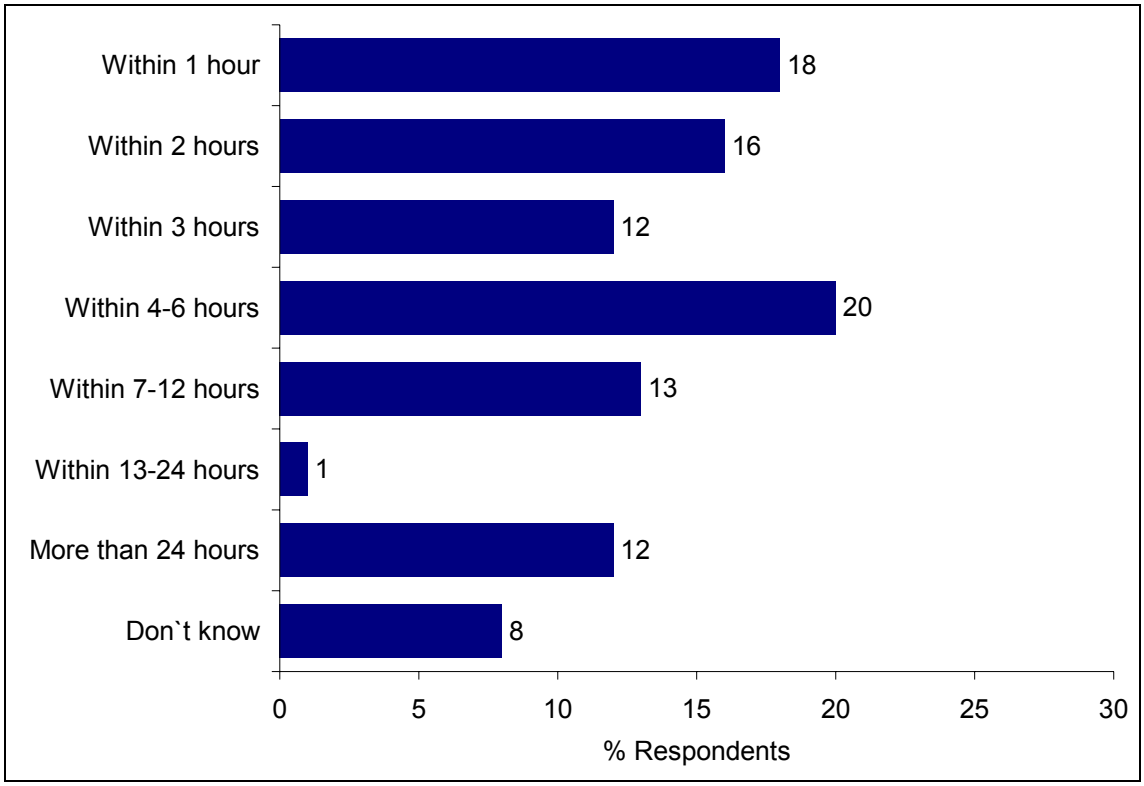


Figure 8: Expected restoration time following a major storm

In normal conditions, many consumers (44%) think power should be restored within the hour, and a further 37% expect power on within 2-3 hours.

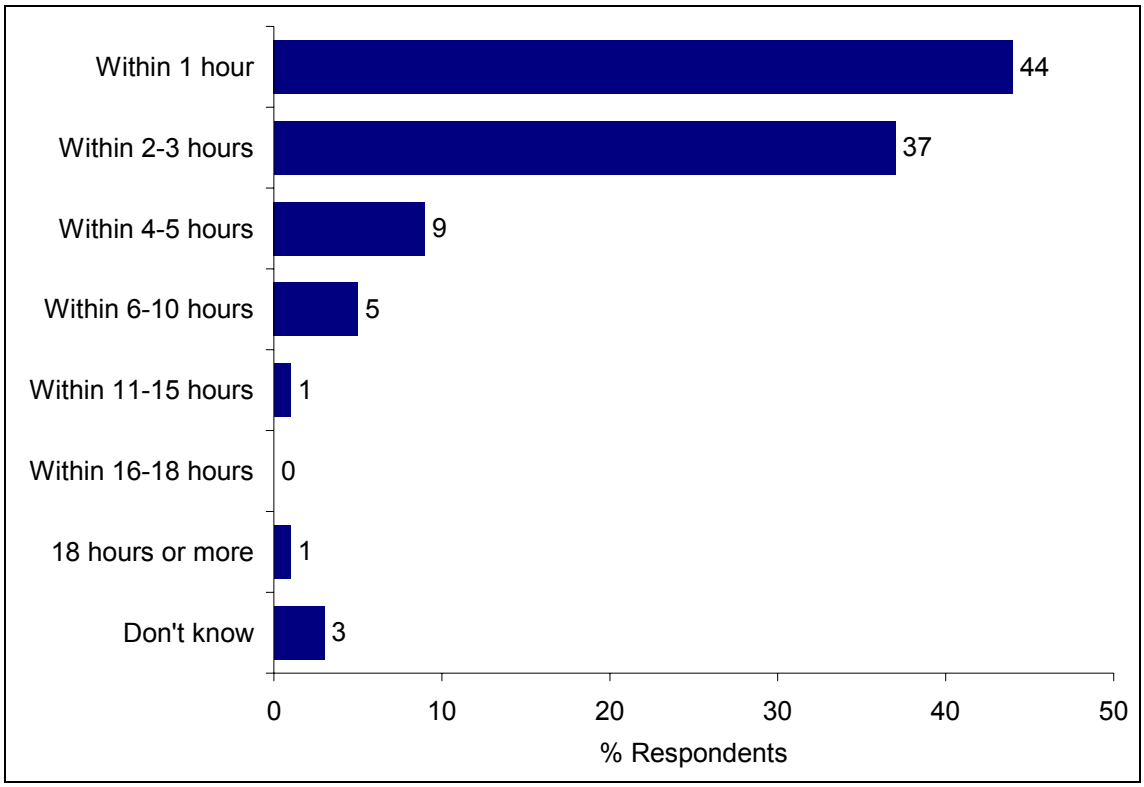


Figure 9: Expected restoration time in normal circumstances

Many domestic consumers expect compensation to be paid after a relatively short power cut. Over two-fifths think compensation should be paid for cuts shorter than 4 hours.

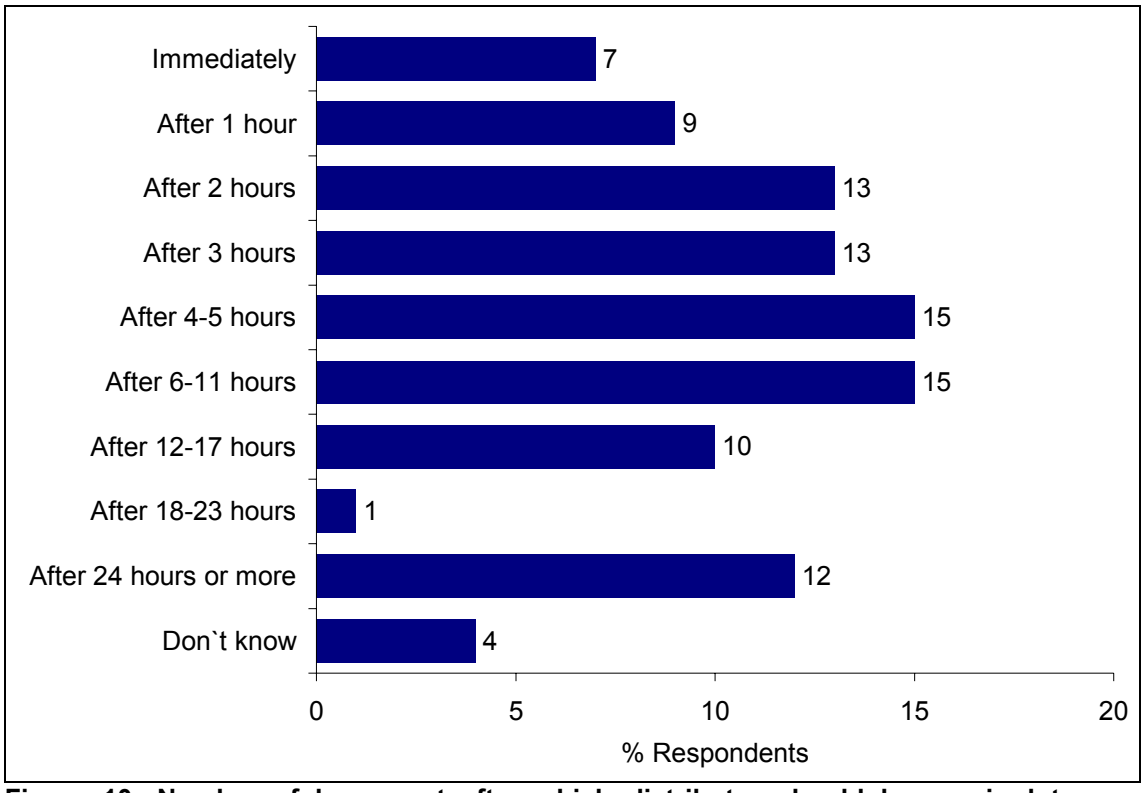


Figure 10: Number of hours cut after which distributor should be required to pay compensation in normal circumstances

Domestic consumers also have high expectations about how many cuts a distributor should be allowed before paying compensation. A tenth think compensation should be paid immediately, while a quarter think it should be paid after one cut and a further quarter after two cuts in a year.

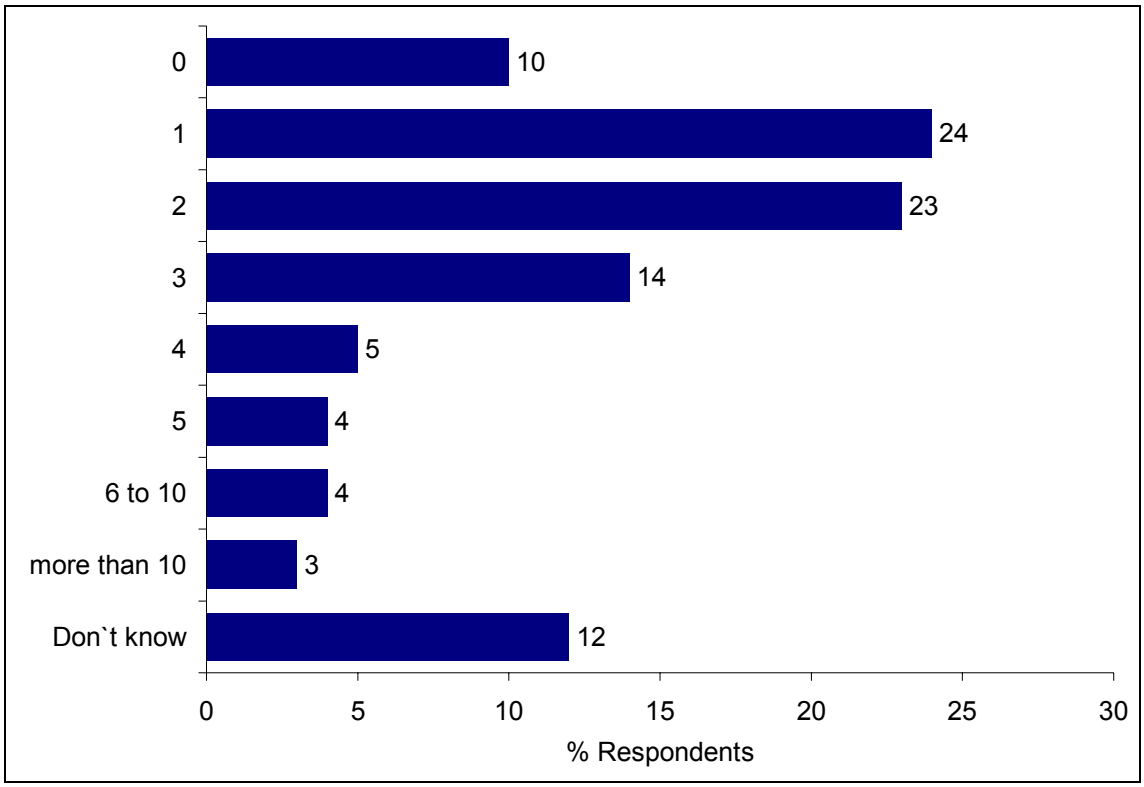


Figure 11: Number of cuts distributor should be allowed before compensation paid

4. DOMESTIC CONSUMERS' VALUATIONS OF CHANGES IN QUALITY OF SERVICE

4.1 Introduction

In the domestic segment, the stated preference analysis was conducted using real values, and therefore the primary output of the valuations is in the number of pounds consumers are willing to pay. These values refer to the additional amount consumers are willing to see on their total bill for year one and subsequent years of the improvement programme. For ease of comparison, tables below also show the values in terms of percentages of the average bill for the relevant segment.

4.2 Change in Number and Duration of Power Cuts

Both rural and urban consumers were asked to place a value on changes in the number of rural cuts and on the number of urban cuts, from the current average number of cuts over 5 years. Consumers place value on service changes in their own type of area, but show no willingness to pay for improvements in other types of area.

A range of improvements to service (reduction from the current average by one or two cuts over 5 years) and decrements to service (increase in the average) were tested. Consumers' willingness to pay for a reduction in average cuts is the same as their willingness to accept for an increase in average cuts. The values shown in the table below show a value per unplanned cut that can be applied to both improvements and decrements in service.

Rural and urban consumers are both willing to pay a similar amount, of about £20, for each cut that is reduced in their own area. The overall average for rural cuts is lower reflecting the relative number of rural consumers in the sample.

Table 19: Change in the number of power cuts

	Rural		Urban		Total	
	£	% av bill	£	% av bill	£	% av bill
Value per unplanned rural cut (reduction in frequency over 5 years from current)	20.04	5.2	0	0	4.35	1.2
Value per unplanned urban cut (reduction in frequency over 5 years from current)	0	0	18.45	5.2	14.59	4.0

Using consumers' relative ratings of their attitudes towards planned and unplanned cuts, the values for unplanned cuts above can be scaled to provide values for planned cuts. Consumers rated their unhappiness with the two different types of cuts as shown in the figures below.

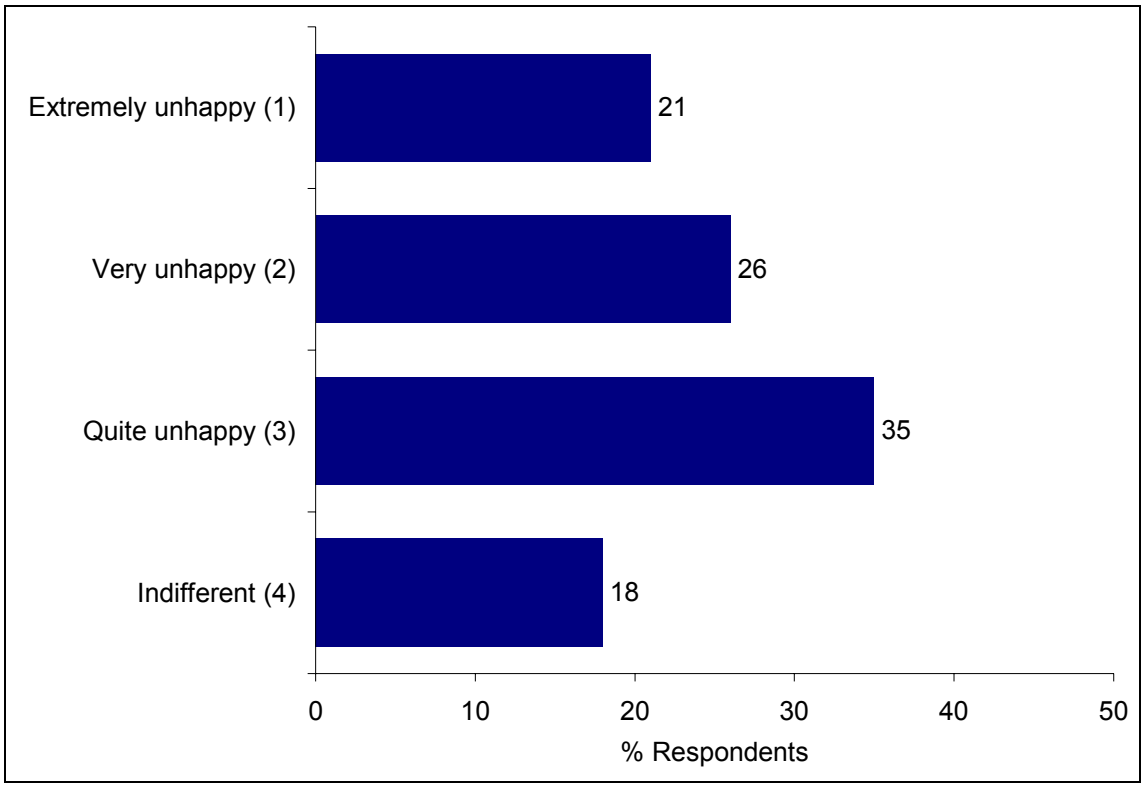


Figure 12: Attitude toward additional unplanned cut

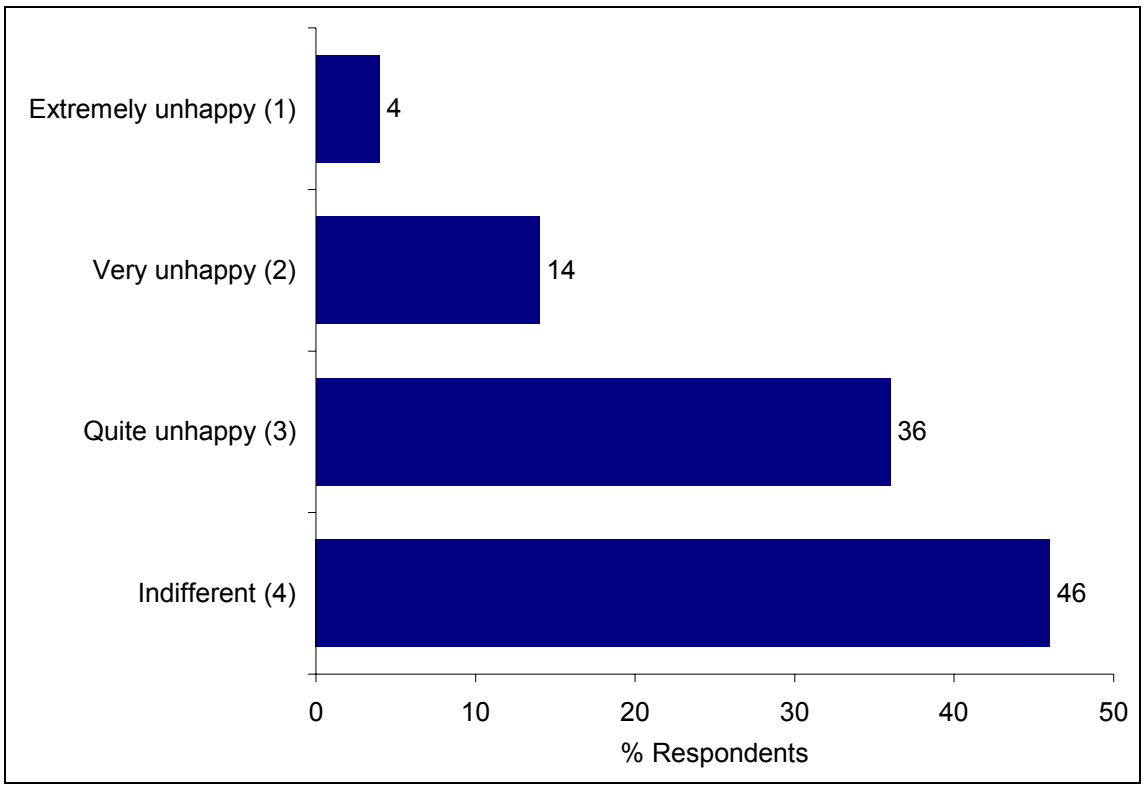


Figure 13: Attitude toward additional planned cut

The values for planned cuts are approximately half those for unplanned cuts, reflecting less inconvenience.

Table 20: Change in the number of planned power cuts

	Rural		Urban		Total	
	£	% av bill	£	% av bill	£	% av bill
Value per **unplanned rural** cut (reduction in frequency over 5 years from current)	20.04	5.2	0	0	4.35	1.2
Value per **planned rural** cut	11.02	2.9	0	0	2.26	0.6
Value per **unplanned urban** cut (reduction in frequency over 5 years from current)	0	0	18.45	5.2	14.59	4.0
Value per **planned urban** cut	0	0	9.28	2.6	7.59	2.1

The overall values for urban and rural cuts can be used to calculate a range of values for willingness to pay for reduction in cuts overall. The proportion of consumers in rural areas is 35% and those in urban areas 65%. To achieve an overall reduction of one cut per consumer nationally by targeting rural consumers a total of 2.86 cuts per rural consumer would be necessary, while to achieve the overall reduction by targeting urban areas would require a total of 1.54 cuts per urban consumer. Willingness to pay for these levels of improvement is shown below.

Table 21: Range of WTP to achieve reduction in cuts overall

	Proportion consumers (%)	WTP for one cut over 5 yrs	# cuts required to achieve national average of 1	WTP to achieve average cut of 1
Rural	35	£ 4.35	1/0.35=2.86	£ 12.43
Urban	65	£ 14.59	1/0.65=1.54	£ 22.45

Consumers' willingness to pay for an improvement in service in terms of reducing the average length of power cuts is also equivalent to the willingness to accept for increasing length of power cuts. The values for this service change can therefore also be applied to both improvements and decrements in service. Rural consumers are willing to pay slightly more than urban consumers to reduce the length of power cuts.

Table 22: Change in duration of power cuts

	Rural		Urban		Total	
	£	% av bill	£	% av bill	£	% av bill
Value per minute reduction to average cut	1.31	0.3	0.79	0.2	1.09	0.3
Value of 20 minute reduction to average cut	24.20	6.0	15.80	4.9	21.80	6.0
Value of 40 minute reduction to average cut	48.40	12.0	31.60	9.8	43.60	12.0

4.3 Improvements in Resilience of Network and Restoration After Major Storms

Significant improvements in network resilience (moving from a major event every year to one every 2 years) are only valued by rural consumers (about £6.50). A major step change in resilience (moving from one event a year to one every 5 years) would be highly valued by both urban and rural consumers (about £14). However, improvements in resilience are generally valued significantly less than quicker restoration times following major events.

Table 23: Value of improvement in resilience of network

	Rural		Urban		Total	
Reduce major cuts from one a year to:	£	% av bill	£	% av bill	£	% av bill
1 every 2 years	6.47	1.7	0	0	0	0
1 every 5 years	13.95	3.6	14.15	4.0	14.13	3.9

Improvements in maximum restoration times are very highly valued by both rural and urban consumers. Reducing the maximum restoration time to 36 hours from the current level of 48 hours is valued at about £20 by rural consumers and £15 by urban consumers. A maximum restoration time of only 24 hours is even more highly valued by rural consumers (£30); urban consumers show a smaller increase in valuation, to £19. Consumers would require a high level of compensation for longer restoration times; consumers on average would expect a £14 reduction in their total bill if maximum restoration times were to increase to 60 hours, with rural consumers requiring almost twice as much as urban consumers (£21 compared with £11).

Table 24: Value of change in maximum restoration time

	Rural		Urban		Total	
Change from current (48 hrs) to:	£	% av bill	£	% av bill	£	% av bill
Within 36 hours (improvement)	19.73	5.1	14.43	4.1	16.02	4.4
Within 24 hours (improvement)	30.14	7.9	18.59	5.3	21.89	6.0
Within 60 hours (decrement)	-21.04	-5.5	-10.70	-3.0	-13.61	-3.7

4.4 Information Provision

Although few consumers currently contact their distributor during a power cut, and those who do are generally happy with the quality of information they receive, consumers place a high value on improving the quality of information available to ensure it is accurate. Updating the information every 2 hours is valued at £22 on average, with urban consumers placing a higher value on this than rural consumers (£25 compared with £19). Since most domestic consumers do not even attempt to obtain this information when experiencing a cut, a value of £22 for improvements in accuracy may seem high. It may be that the context of the interview, covering major power cuts as well as typical events, caused consumers to value information more highly. There may also be an implication that the information currently available is not accurate. Consumers do not value the idea of receiving on request callbacks from the distributor to update on the power cut. They show some altruism in being prepared to pay around £10 per year to provide a helpline for those dependent for electricity on medical equipment.

Table 25: Valuation of improvements in information

	Rural		Urban		Total	
Additions to current provision	£	% av bill	£	% av bill	£	% av bill
Updated every 2 hours	18.74	4.9	24.98	7.1	22.03	6.0
Callbacks if required	0	0	0	0	0	0
Helpline	10.70	2.8	10.05	2.9	10.47	2.9

4.5 Compensation

Consumers see little value in tightening the multiple interruption standard so that payments are made after 3 rather than 4 cuts. However, they would require high levels of discount to compensate them for a relaxation of the standard so that payments are made after 5 cuts. The expected discount is particularly large for rural consumers.

Changing the compensation standards so that compensation under the 18 hour standard is automatic, but other standards have to be claimed, is not valued by consumers. Urban consumers place some value, of about £5, on having automatic compensation under all the standards.

Table 26: Valuation of Changes in Compensation Arrangements

	Rural		Urban		Total	
	£	% av bill	£	% av bill	£	% av bill
Compensation after 3 cuts (improvement)	0	0	1.10	0.3	0	0
Compensation after 5 cuts (decrement)	-28.63	-7.5	-17.53	-5.0	-20.91	-5.7
Automatic compensation for 18hr standard only	0	0	0	0	0	0
Automatic compensation for all standards	0	0	5.20	1.5	5.33	1.5

4.6 Undergrounding of the Network

Both urban and rural consumers value the undergrounding of the network in national parks and other places of outstanding natural beauty.

Table 27: Valuation of Undergrounding of Network for Aesthetic Reasons

	Rural		Urban		Total	
	£	% av bill	£	% av bill	£	% av bill
Per % of network per annum	2.63	0.7	2.18	0.6	2.42	0.7

4.7 Summary of Improvement Priorities

All aspects of service tested are shown in the tables below, in order of overall value.

Table 28: Summary: Priorities Between Maintaining Current Services

	Rural		Urban		Total	
	£	% av bill	£	% av bill	£	% av bill
Compensation after 5 cuts (decrement)	-28.63	-7.5	-17.53	-5.0	-20.91	-5.7
Restoration within 60 hours (decrement)	-21.04	-5.5	-10.70	-3.0	-13.61	-3.7

Table 29: Summary: Priorities Among Improvement to Services

	Rural		Urban		Total	
	£	% av bill	£	% av bill	£	% av bill
40 minute reduction to average cut	48.40	12.0	31.60	9.8	43.60	12.0
Information updated every 2 hours	18.74	4.9	24.98	7.1	22.03	6.0
Restoration within 24 hours (improvement)	30.14	7.9	18.59	5.3	21.89	6.0
20 minute reduction to average cut	24.20	6.0	15.80	4.9	21.80	6.0
Restoration within 36 hours (improvement)	19.73	5.1	14.43	4.1	16.02	4.4
Value per unplanned urban cut (reduction in frequency over 5 years from current)	0	0	18.45	5.2	14.59	4.0
Reducing major outages to 1 every 5 years	13.95	3.6	14.15	4.0	14.13	3.9
Helpline	10.70	2.8	10.05	2.9	10.47	2.9
Automatic compensation for all standards	0	0	5.20	1.5	5.33	1.5
Value per unplanned rural cut (reduction in frequency over 5 years from current)	20.04	5.2	0	0	4.35	1.2
Undergrounding, per % of network per annum	2.63	0.7	2.18	0.6	2.42	0.7
Value per minute reduction to average cut	1.31	0.3	0.79	0.2	1.09	0.3
Reducing major outages to 1 every 2 years	6.47	1.7	0	0	0	0
Callbacks during power cut if required	0	0	0	0	0	0
Compensation after 3 cuts (improvement)	0	0	1.10	0.3	0	0
Automatic compensation for 18hr standard only	0	0	0	0	0	0

4.8 Regional Analysis

The domestic data did not support segmentation to the level of the individual DNOs' areas. Models showed excessive variability and a large number of insignificant terms. The reason would appear to be that the domestic data set is made up of a number of different segments, each with priorities very different from each other. This is most clearly seen in the case of the rural/urban split, where these two groups have completely opposing priorities in terms of reducing number of cuts in urban and rural areas. In the

overall data set the sample numbers are high enough to produce very significant results even when rural and urban consumers are analysed together. However, the explanatory power of the models, as indicated by the proportion of variance explained (Rho squared) is greatly improved when these two groups are analysed separately, giving separate urban and rural results.

This indicates that the results are much more consistent within the rural and urban segments than for the overall data set. Analysis at the overall DNO level does not provide good results because the sample sizes are relatively small, but still contain the high levels of diversity of priorities found in the overall data set. Unfortunately, further segmentation of each DNO by rural/urban did not improve this, because by this time the sample sizes are too small to produce adequate models. The inability to provide individual DNO models is a function of the degree of variation in consumer priorities, but the overall models are based on a data set large enough to provide robust and significant results.

The DNO areas were therefore combined into four areas for regional analysis, as follows:

- Region 1: WPD South West, WPD South Wales, SP Manweb
- Region 2: EDF Energy Networks (EPN), EDF Energy Networks (SPN), Southern
- Region 3: Central Networks (West), Central Networks (East), YEDL, NEDL, UU
- Region 4: Scottish Power, Scottish Hydro.

EDF Energy Networks (EDF Energy Networks (LPN)) was analysed completely separately as it had its own design.

Region 4 still failed to produce a satisfactory model but the other regions did produce results as shown below. The regions are fairly consistent but the most striking difference is the much higher willingness to pay of Region 3 for improvements in information. Consumers in the NEDL region, which is included in Region 3, were much more likely to indicate that they failed to get through to the distributor if they attempted to contact them during a power cut; 60% of those who tried, said that they failed, compared to between 3% and 23% of other DNOs. There may be a general dissatisfaction with information provision in this region. But the sample size is very small (n=38) and it seems unlikely that this could be driving this difference entirely.

Table 30: Regional variation in WTP values

Variable	Region 1 % of bill	Region 2 % of bill	Region 3 % of bill	EDF Energy Networks (LPN) % of bill	Total % of bill
Value per unplanned rural cut (reduction in frequency over 5 years from current)	0.8	1.2	0.8	N/A	1.2
Value per unplanned urban cut (reduction in frequency over 5 years from current)	2.2	4.1	4.3	4.8	4.0
Value per minute reduction to average cut	0.2	0.3	0.3	0.2	0.3
Reducing major cuts to 1 every 2 years	0.0	0.0	0.0	N/A	0.0
Reducing major cuts to 1 every 5 years	3.0	3.8	4.9	N/A	3.9
Information during outage updated every 2 hours	5.5	3.7	11.0	N/A	6.0
Call backs during outage if required	0.0	0.0	0.0	N/A	0.0
Helpline	3.6	1.9	2.8	N/A	2.9
Undergrounding (per % per year)	0.9	1.2	0.0	0.0	0.7
Maximum restoration time 60 hours (decrement)	-2.6	-3.6	-3.9	N/A	-3.7
Maximum restoration time 36 hours (improvement)	3.5	5.6	4.6	N/A	4.4
Maximum restoration time 24 hours (improvement)	4.6	7.7	6.2	N/A	6.0
Compensation paid after 5 cuts (decrement)	-4.2	-7.0	-5.7	0.0	-5.7
Compensation paid after 3 cuts (improvement)	0.0	0	0.4	0.0	0.0
Automatic compensation for all standards	1.5	0.0	1.8	N/A	1.5

Region 1: WPD South West, WPD South Wales, SP Manweb
Region 2: EDF Energy Networks (EPN), EDF Energy Networks (SPN), Southern
Region 3: Central Networks (West), Central Networks (East), YEDL, NEDL, UU

4.9 Domestic Confidence Limits

Confidence intervals cannot be obtained for willingness-to-pay (WTP) values directly, because each value is derived from at least three, sometimes four or more, different coefficients. But the upper and lower confidence limits of the coefficients can be used to derive an upper and lower value of willingness to pay. Normally, we can state with 95% confidence that the coefficient lies between +/-1.96*standard error (s.e.) of the coefficient. So, to derive the lower value, a WTP is calculated using all coefficients in the calculation 1.96 * s.e. lower than the central values. For the upper, all coefficients in the calculation are 1.96 * s.e. higher than the central values. Upper and lower WTP values are not necessarily equidistant from the central values because of the complexity of the calculations.

Table 31: Domestic WTP confidence limits

Variable	WTP (£)	Lower limit	Upper limit	WTP (% of bill)	Lower limit	Upper limit
Value per unplanned rural cut (reduction in frequency over 5 years from current)	4.35	2.97	6.25	1.2	0.8	1.7
Value per unplanned urban cut (reduction in frequency over 5 years from current)	14.59	11.51	19.19	4.0	3.2	5.3
Value per minute reduction to average cut	1.09	0.93	1.35	0.3	0.3	0.4
Reducing major cuts to 1 every 2 years	0.00	0.00	0.00	0.0	0.0	0.0
Reducing major cuts to 1 every 5 years	14.13	10.52	19.56	3.9	2.9	5.4
Information during outage updated every 2 hours	22.03	20.72	25.23	6.0	5.7	6.9
Call backs during outage if required	0.00	0.00	0.00	0.0	0.0	0.0
Helpline	10.47	6.73	15.78	2.9	1.8	4.3
Undergrounding (per % per year)	2.42	1.86	3.28	0.7	0.5	0.9
Maximum restoration time 60 hours (decrement)	-13.61	-12.04	-16.20	-3.7	-3.3	-4.4
Maximum restoration time 36 hours (improvement)	16.02	14.17	19.06	4.4	3.9	5.2
Maximum restoration time 24 hours (improvement)	21.89	19.36	26.05	6.0	5.3	7.1
Compensation paid after 5 cuts (decrement)	-20.91	-18.49	-24.88	-5.7	-5.1	-6.8
Compensation paid after 3 cuts (improvement)	0	0	0	0	0	0
Automatic compensation for all standards	5.33	4.71	6.34	1.5	1.3	1.7

4.10 Effect of External Events on Valuations

During the fieldwork, a BBC TV programme called *If…the Lights Go Out,* broadcast on 10th March, dramatised a countrywide major power cut. At around the same date, a Trade and Industry Select Committee report was issued on the resilience of the networks. To test if these events might have affected response to the survey, the data set was split into two parts, those who had been interviewed before 10 March and those who had been interviewed after, and their valuations were compared. A total of 447 interviews were conducted before 10th March and 1517 after that date.

Although some values from the second part of the sample are higher, the differences are minimal and generally fall within the ranges derived from the 95% confidence limits, so it cannot be concluded that there is a difference in the values of those interviewed before and after the date.

Table 32: Effect of External Events on Valuations

Variable	'Before' (£)	'After' (£)	Total (£)
Value per unplanned rural cut (reduction in frequency over 5 years from current)	3.45	4.73	4.35
Value per unplanned urban cut (reduction in frequency over 5 years from current)	14.70	14.50	14.59
Value per minute reduction to average cut	0.89	1.16	1.09
Reducing major cuts to 1 every 2 years	0.00	0.00	0.00
Reducing major cuts to 1 every 5 years	12.51	14.63	14.13
Information during outage updated every 2 hours	19.12	22.84	22.03
Call backs during outage if required	0.00	0.00	0.00
Helpline	8.53	11.11	10.47
Undergrounding (per % per year)	3.06	2.18	2.42
Maximum restoration time 60 hours (decrement)	13.14	15.02	-13.61
Maximum restoration time 36 hours (improvement)	15.24	17.72	16.02
Maximum restoration time 24 hours (improvement)	19.97	24.75	21.89
Compensation paid after 5 cuts (decrement)	-18.53	-23.65	-20.91
Compensation paid after 3 cuts (improvement)	0.26	0	0
Automatic compensation for all standards	5.87	0.00	5.33

It is possible that consumers' valuations are affected by other external events, such as the major power cuts that took place in both New York and London before this project started, and which were covered extensively in the media, or the power cuts that took place in the North and Scotland following severe weather over the New Year, but there is no way to test this using the data.

5. BUSINESS CONSUMERS' EXPERIENCE AND ATTITUDES

Please note that numbers in tables and figures may not add to 100% due to rounding.

5.1 Size of Organisations

The percentage of business consumers with large (over £159,000 per annum), medium (£15,000 to £159,000 per annum) and small (less than £15,000) bills is shown for each DNO below.

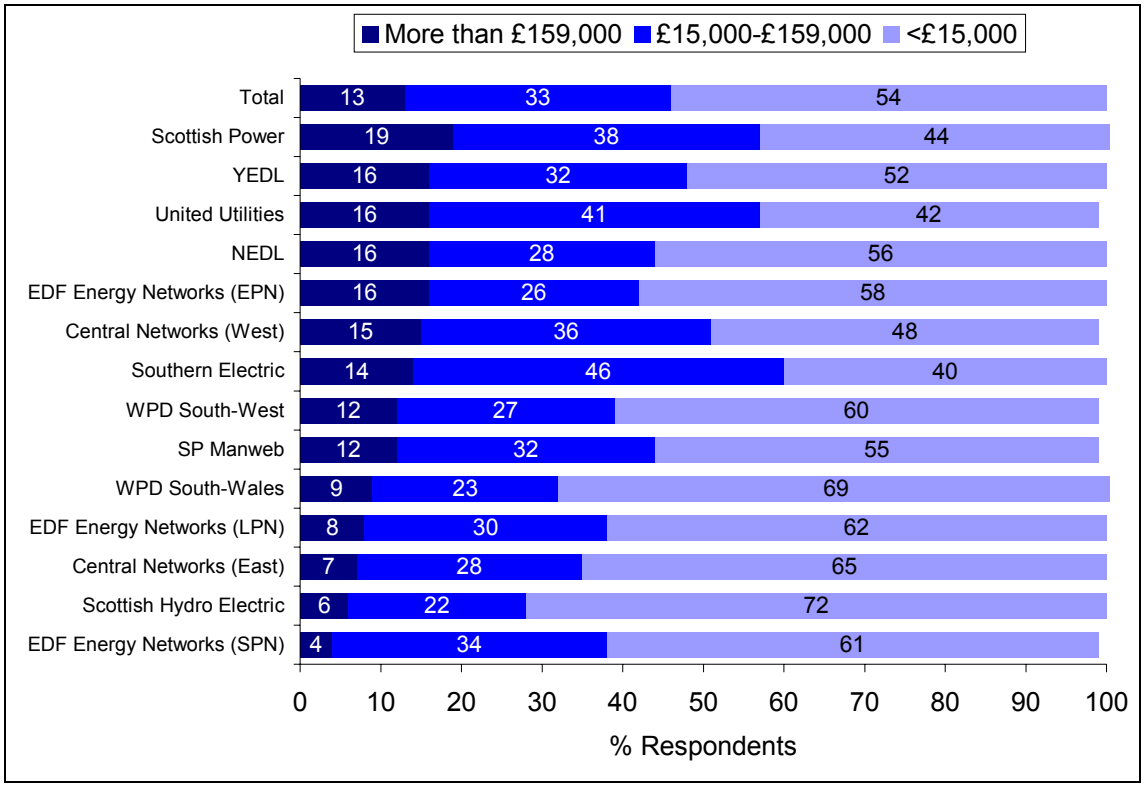


Figure 14: Size of Organisation

5.2 Experience of Outages

Large organisations are slightly less likely to report that they have experienced an unplanned power cut in the last 12 months; 40% of large organisations say they have done so, compared with 46% of both medium and small companies.

Frequent cuts are rare; most of those who have experienced cuts say they have had only one or two in the year.

Small organisations are more likely to experience more frequent and longer unplanned cuts than larger ones, as shown in the figures below.

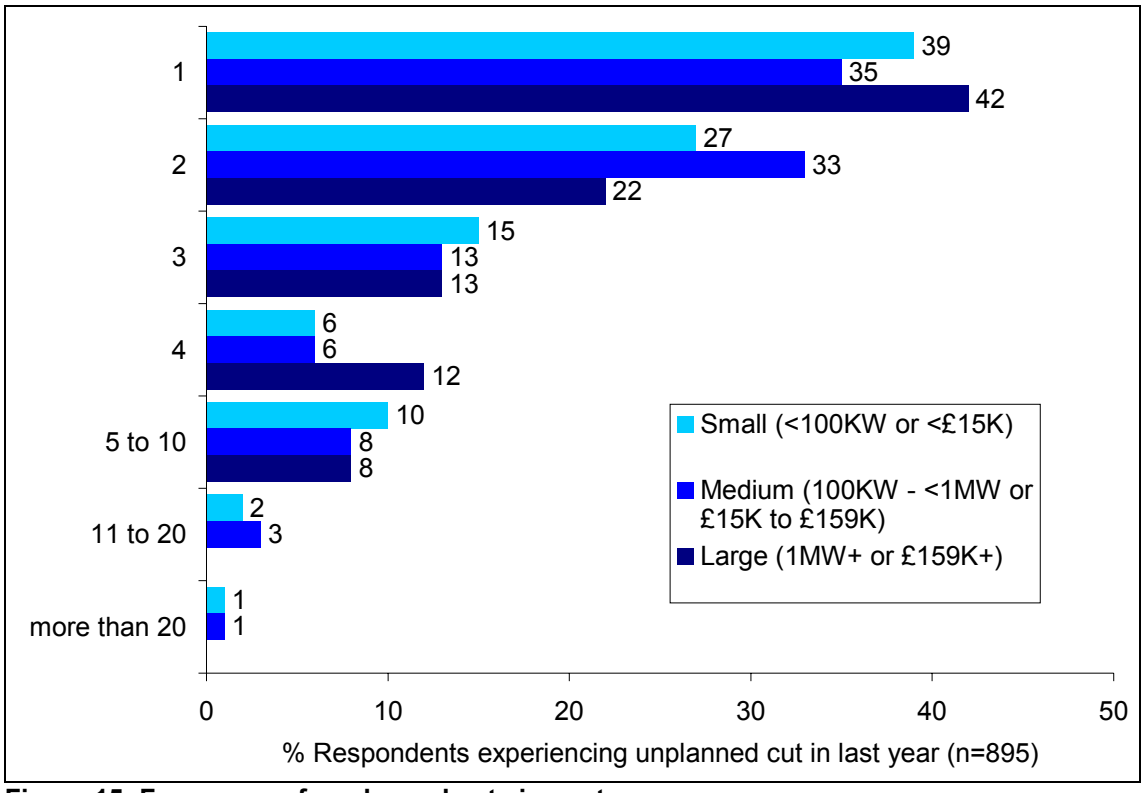


Figure 15: Frequency of unplanned cuts in past year

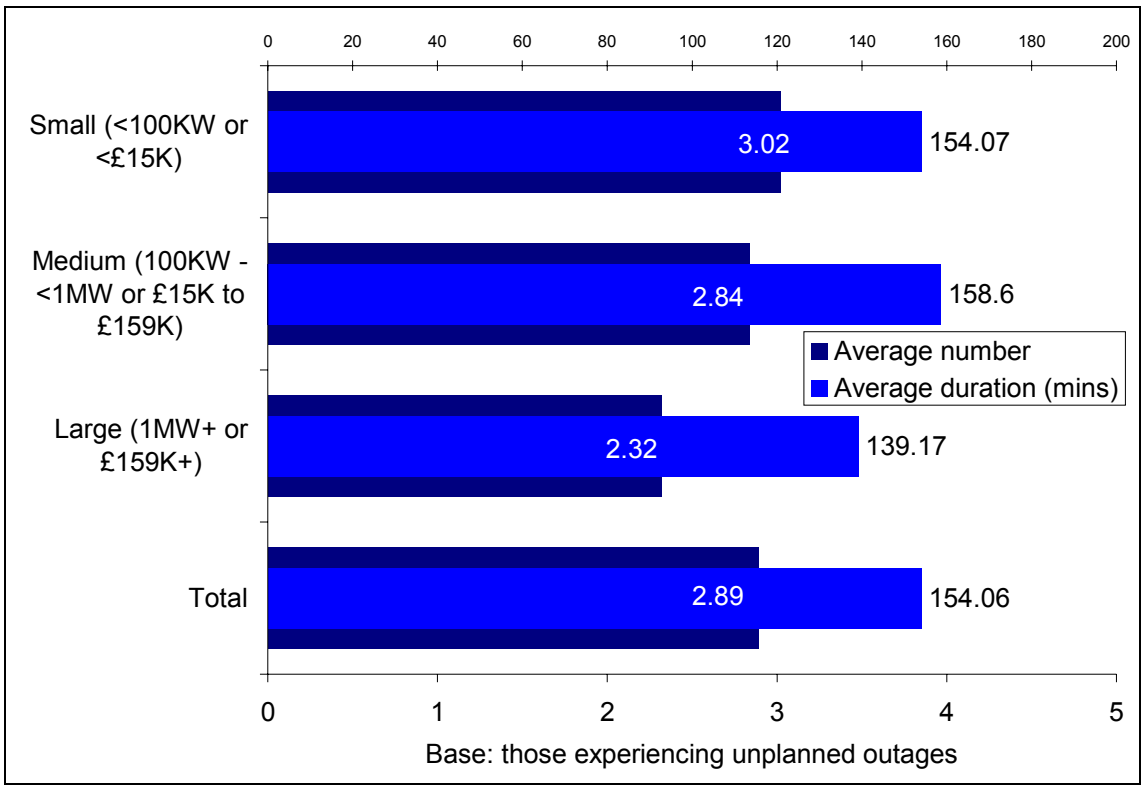


Figure 16: Average frequency and duration of unplanned cuts in past year

Around one in ten (10%) of business consumers have experienced a planned power cut in the past year. Generally they only experienced one planned cut (75% had only one cut) but the average duration is slightly longer at 177 minutes.

5.3 Experience of Contacting Distributor During Power Cut

Business consumers are much more likely to contact their distributor during an unplanned power cut than domestic consumers. Of the 62% who attempted to get through, the vast majority were successful (86%). Generally the perceived response time is fast, with almost one third (31%) stating that their calls were answered within 10 seconds.

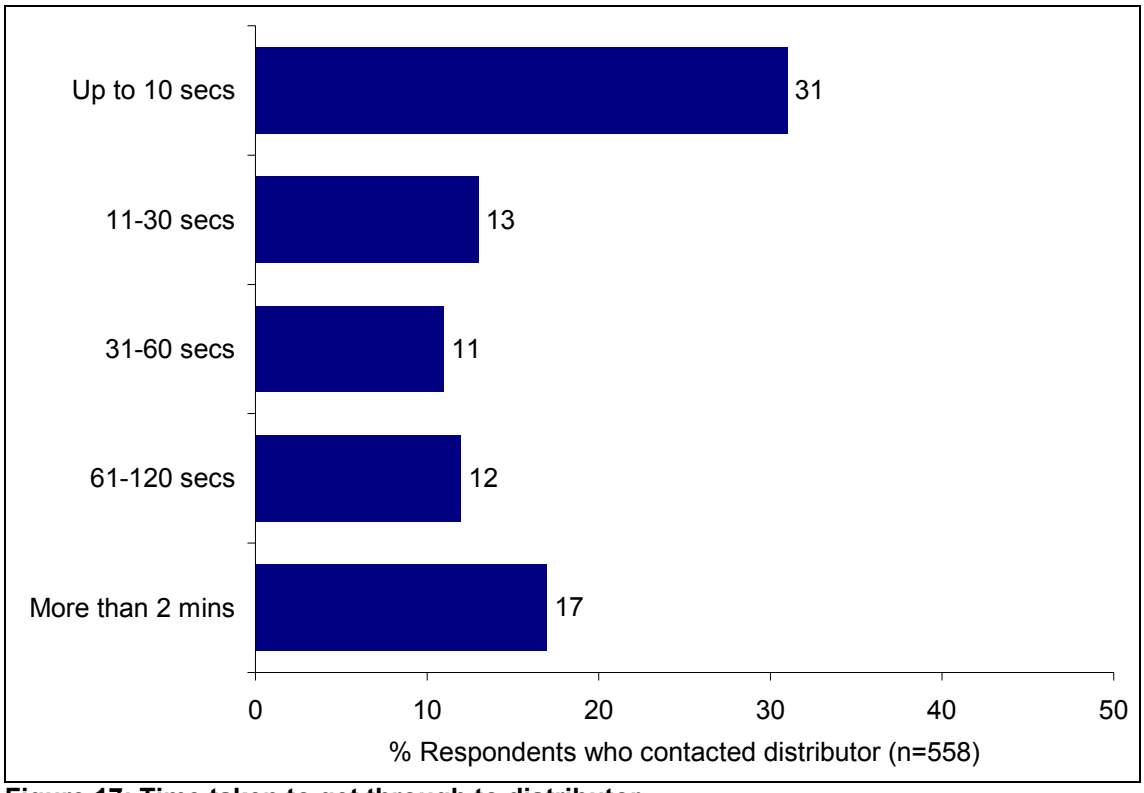


Figure 17: Time taken to get through to distributor

About a third of those who contacted their distributor received an automated response and a further third spoke to someone (the remainder did both or could not remember). Most business consumers get the information they want (69%) and the vast majority find the information they receive is correct (87%). Those who spoke to someone are more likely to say they got the information they wanted, but there is only a small difference in the accuracy of the information between speaking to a person and an automated response.

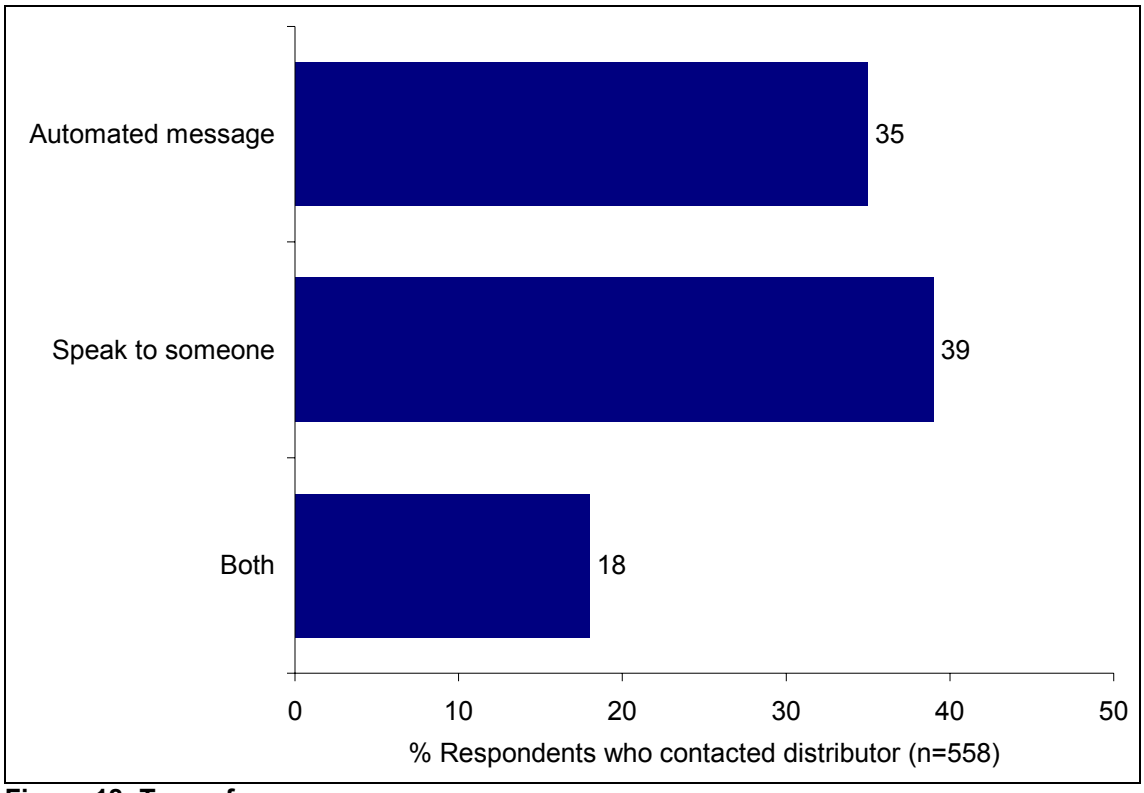


Figure 18: Type of response

Table 33: Quality of Information by Type of Response

	Type of response			Total %
	Automated message %	Spoke to someone %	Both %	
Got the information they were looking for	64	75	71	69
Information was correct	90	88	85	87

In general therefore businesses tend to have a positive experience when contacting their distributor during a power cut, and unlike domestic consumers are more likely to have experienced the quality of information at first hand.

5.4 Expectations of Quality of Service

Awareness of the standards and targets currently in place is low among all businesses. Larger organisations are only slightly more aware than smaller ones.

Table 34: Awareness of 18 hour restoration standard[1]

	Large %	Medium %	Small %	Total %
Aware of standard but not amount of compensation	8	10	6	8
Aware of standard and amount of compensation	10	6	4	5
Unaware of standard or compensation	83	84	90	87

[1]The definition used in the question was: "Distributors should restore consumers' supplies within 18 hours following unplanned interruptions. Failure to do so results in a penalty payment of £100 for business consumers for the first 18 hours plus £25 for each additional 12 hours."

Table 35: Awareness of penalty payment of £50 for 4+ cuts[2]

	Large %	Medium %	Small %	Total %
Aware of standard but not amount of compensation	6	4	3	4
Aware of standard and amount of compensation	4	4	1	2
Unaware of standard or compensation	90	92	96	94

[2]The definition used in the question was: "Consumers are entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year."

Table 36: Awareness of 2 day notice standard[3]

	Large %	Medium %	Small %	Total %
Aware of standard but not amount of compensation	15	19	14	16
Aware of standard and amount of compensation	8	5	2	4
Unaware of standard or compensation	77	76	84	81

[3]The definition used in the question was: "Consumers must be given at least 2 days' notice of a planned power cut. Failure to do so results in a penalty payment of £40 for business consumers."

5.5 Expectations of Quality of Service

Business consumers have high expectations of quality of service. Although three quarters (74%) think it is reasonable for a power cut to occur in a major storm, an almost equal proportion (73%) think that distribution companies should be doing more to reduce the impact of severe weather on their networks. Like domestic consumers, businesses look for their power to be restored quickly. Even after a major storm, only one in five businesses (19%) think power should take 24 hours or more to restore. A fifth expect power to be restored within one hour even in these circumstances, and a further 26% expect it to be restored within 2 or 3 hours.

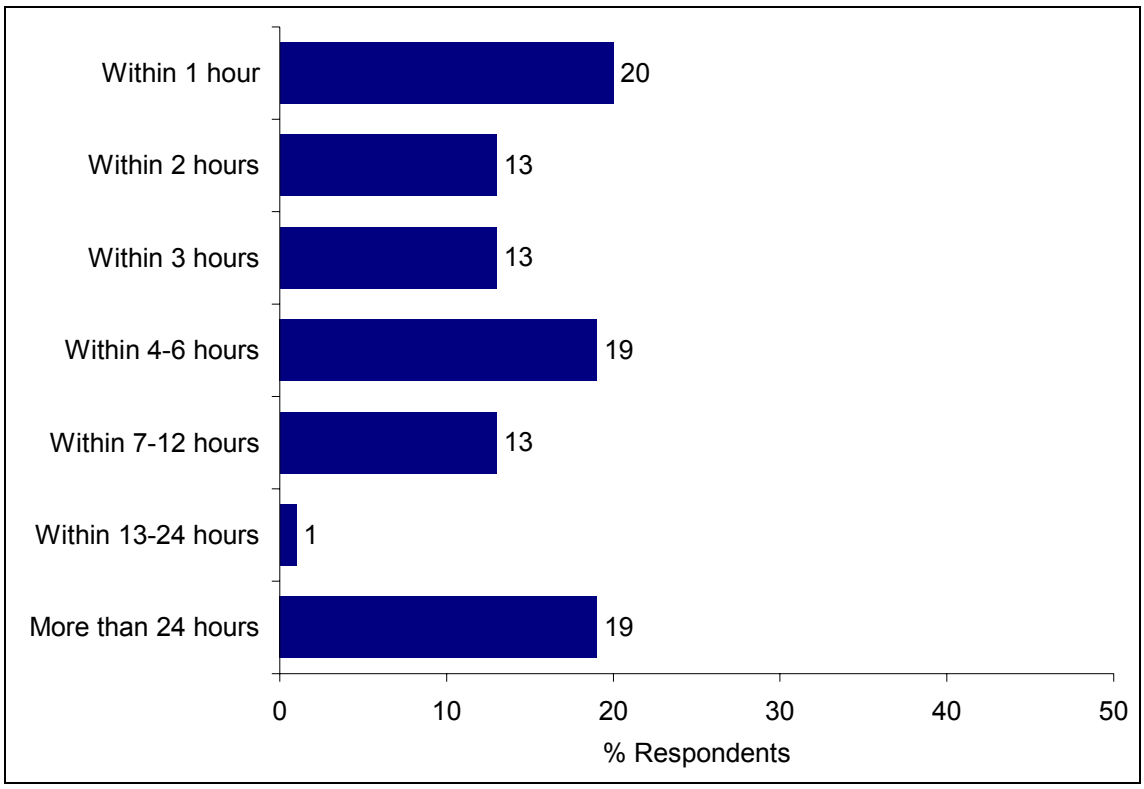


Figure 19: Expected restoration time following a major storm

In normal conditions, over half (56%) of businesses expect power to be restored within an hour.

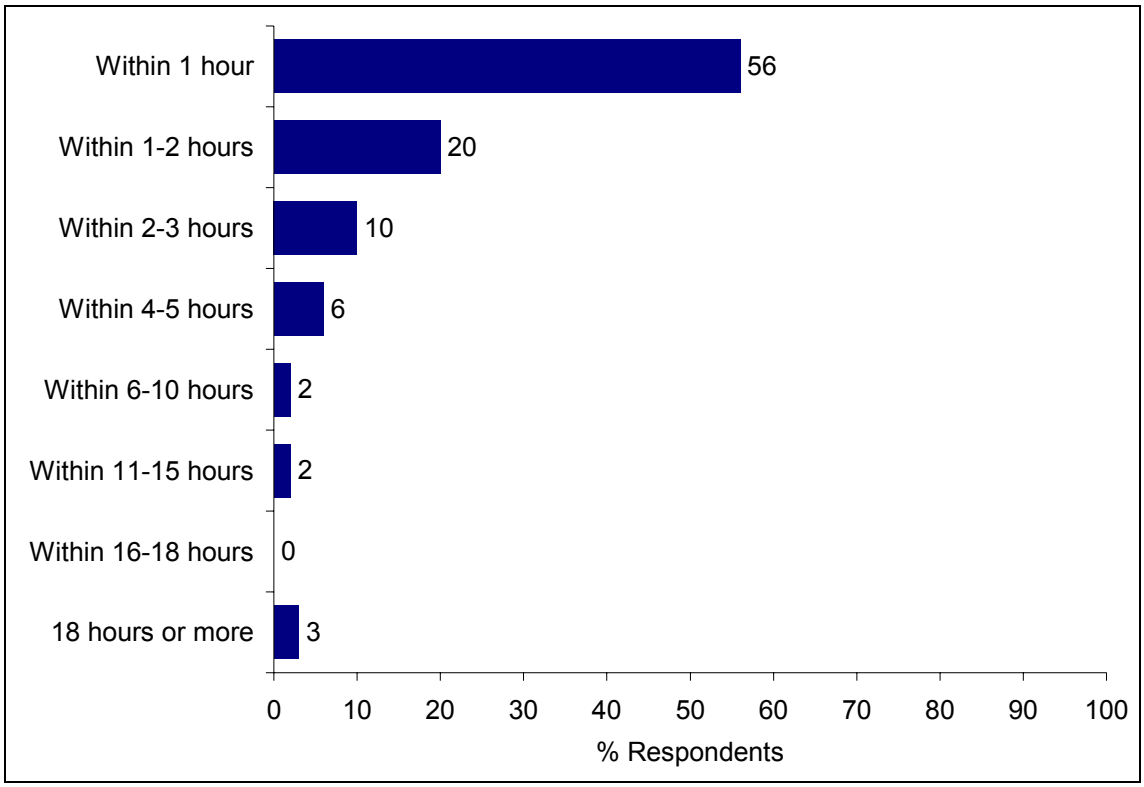


Figure 20: Expected restoration time in normal circumstances

Over a tenth (13%) of businesses believe that compensation should be paid immediately, and a fifth (21%) that it should be paid after only one hour of a power cut.

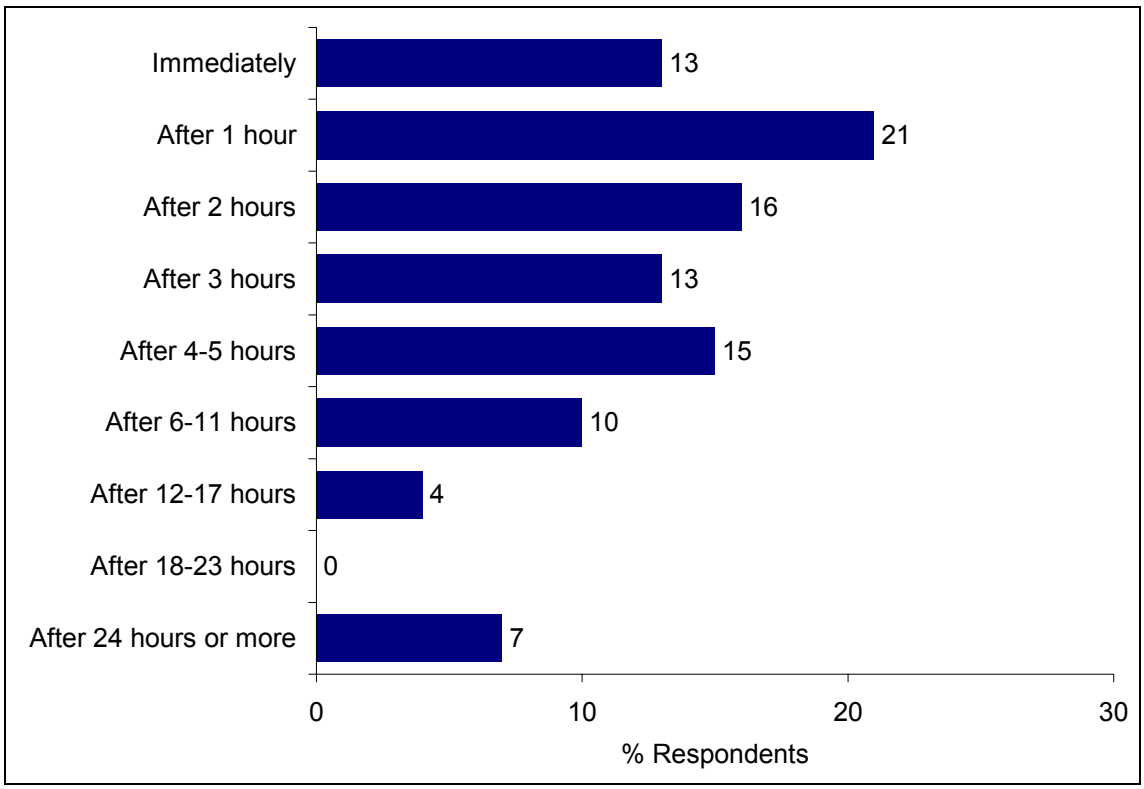


Figure 21: Number of hours after which distributor should be required to pay compensation in normal circumstances

Business consumers have very high expectations about the number of cuts distributors should be allowed before compensation starts to be paid. Over a quarter (28%) think no cuts should be allowed (i.e. compensation should be paid for the first cut in a year); a third (33%) would only be prepared to accept one cut in a year before compensation is paid.

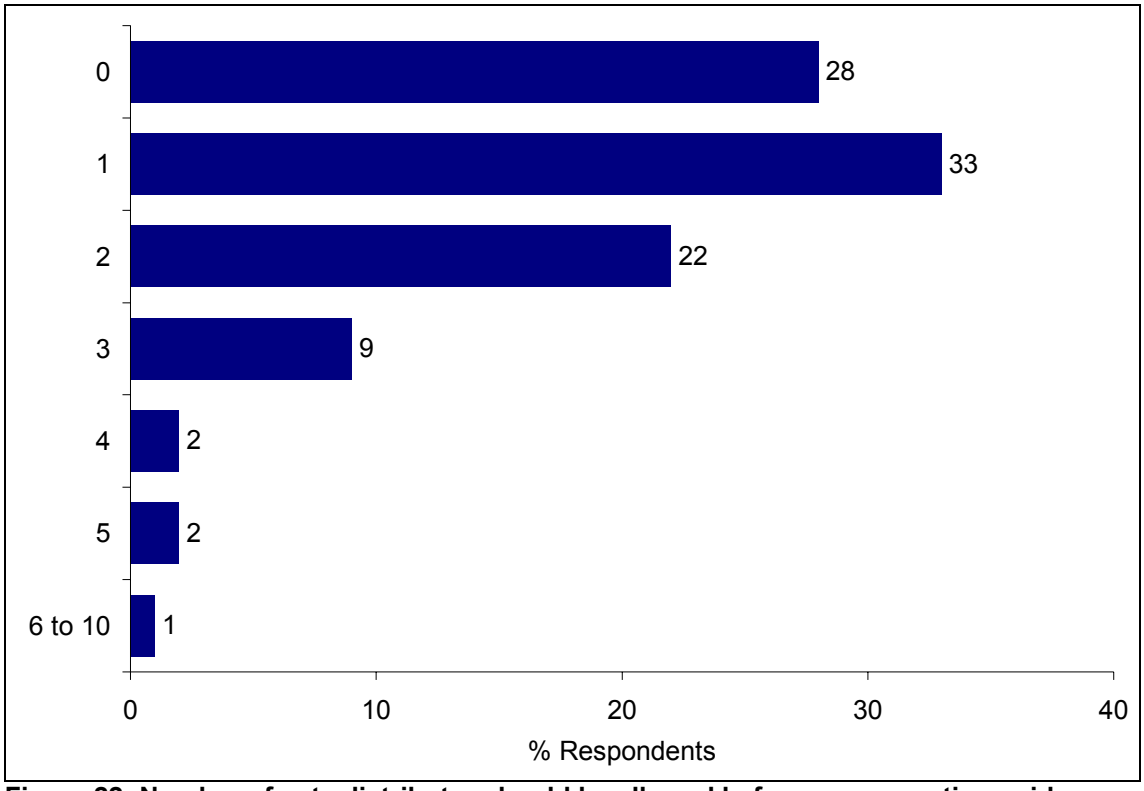


Figure 22: Number of cuts distributor should be allowed before compensation paid

6. BUSINESS CONSUMERS' VALUATIONS OF CHANGES IN SERVICE

6.1 Introduction

The stated preference analysis in the business segment was conducted using percentage values, and results are therefore shown in terms of percentage changes to their total electricity bills which businesses are willing to pay in the first and subsequent years of the improvement programme.

6.2 Change in Number and Duration of Power Cuts

All sizes of business are prepared to pay between 3 and 4% of their bill to see a reduction in frequency of power cuts in urban areas, but only medium and small companies are prepared to pay for reductions in rural areas and even then their willingness to pay is substantially less (less than 1%). Undoubtedly this reflects the location of most businesses and therefore their likelihood of being affected by the different type of cuts.

Table 37: Change in the number of power cuts

	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
Value per unplanned rural cut (reduction in frequency over 5 years from current)	0	0.46	0.84	0.88	0	0.54
Value per unplanned urban cut (reduction in frequency over 5 years from current)	3.58	3.93	3.06	2.43	4.95	3.52

The values for unplanned cuts were scaled using attitudinal ratings to provide values for planned cuts, as with the domestic values. While small and medium companies value planned cuts about half as much as unplanned cuts, large organisations see less differential between them, valuing a planned cut at about two thirds of an unplanned cut. The relative inconvenience is not reduced by advance notice to the same extent for large organisations.

Table 38: Change in the number of power cuts

	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
Value per **unplanned rural** cut (reduction in frequency over 5 years from current)	0	0.46	0.84	0.88	0	0.54
Value per **planned rural** cut (reduction in frequency over 5 years from current)	0	0.25	0.42	0.46	0	0.29
Value per **unplanned urban** cut (reduction in frequency over 5 years from current)	3.58	3.93	3.06	2.43	4.95	3.52
Value per **planned urban** cut (reduction in frequency over 5 years from current)	2.22	2.11	1.54	1.28	2.65	1.86

Using the proportion of rural and urban consumers to calculate a range of willingness-to-pay for an overall national average reduction of one cut per consumer, as before, gives the following values:

Table 39: Range of WTP to achieve cuts overall

	Proportion consumers (%)	WTP for one cut over 5 yrs	# cuts required to achieve national average of 1	WTP to achieve average cut of 1
Rural	35	0.54%	2.86	1.54%
Urban	65	3.52%	1.54	5.42%

Smaller companies place more value on reductions to the average duration of cuts than large or medium companies.

Table 40: Change in the duration of power cuts

	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
Value per minute reduction to average cut	0.12	0.12	0.17	0.15	0.15	0.14
Value of 20 minute reduction to average cut	2.47	2.43	3.36	2.96	3.03	2.88
Value of 40 minute reduction to average cut	4.93	4.86	6.72	5.91	6.06	5.77

6.3 Improvements in Resilience of Network and Restoration after Major Storms

Reducing the number of major cuts in the network, affecting 1% of a DNO's consumers, from an average of one per year is not valued by large organisations. They either do not expect to suffer from these events or have contingency plans in place, such as generators. However the medium and smaller organisations value significant reductions in the frequency of such major events occurring to one every 2 years at 2% and 2.85% of their final electricity bill respectively. A step change in the frequency of such events occurring to once every 5 years is highly valued at 3.41% for medium and 4.47% for small companies. However, it is still valued significantly less than quicker restoration times following major events

Table 41: Value of improvement in resilience of network

Reduce major cuts from one a year to:	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
1 every 2 years	0	2.05	2.85	2.60	1.90	2.23
1 every 5 years	0	3.41	4.47	3.96	3.24	3.60

Improving maximum restoration times after major storms is one of the most highly valued aspect of service improvement tested. Overall, an improvement from the current maximum time of 48 hours to 36 hours is valued at 3.88% of the bill; a further improvement to 24 hours is worth almost 5% (4.68%). A decrement in service, so that maximum restoration times increased to 60 hours, would require an equally large compensation; the value of such a change is – 4.27%.

Table 42: Value of change in maximum restoration time

Change from current (48 hrs) to:	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
Within 36 hours (improvement)	2.90	4.12	4.25	4.14	3.92	3.88
Within 24 hours (improvement)	3.83	4.87	5.85	4.82	5.27	4.86
Within 60 hours (decrement)	-4.02	-5.51	-3.47	-4.73	-4.18	-4.27

6.4 Information Provision

It was previously noted that business consumers are much more likely than domestic consumers to have experience of contacting the distributor during a power cut, and in general are able to get through and get the information they want when they do so. Improvements to the service are therefore not likely to be required, and in fact only small companies value any improvement to the service in terms of callbacks during an outage if required (1.73%). Business consumers are not willing to pay for a dedicated business helpline. In the stage 1 survey, nine out of ten businesses said they would expect a dedicated contact line for businesses in the event of a power cut, and having a dedicated contact was rated very important by 47% (rapid restoration of power was the most important aspect in that survey, rated very important by 89%). However, the implication of the findings of this survey is that while expected and important, a dedicated helpline is not something businesses are willing to pay for.

Table 43: Valuation of Improvements in Information

Additions to current provision	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
Callbacks if required	0	0	1.73	0.87	0.85	0.87
Helpline	0	0	0	0	0	0

6.5 Compensation

Business consumers place little value on tightening the multiple interruption standard so that payments are made after 3 cuts longer than 3 hours rather than 4, and nor do they require large amounts of discount to compensate them for a relaxation in this standard so that payments are made after 5 cuts.

Only small business consumers place value on an improvement in compensation arrangements; if the compensation were paid after 14 hours rather than 18, was based on the bill size rather than a fixed amount, and was paid automatically, small consumers would pay less than 1% more.

Table 44: Valuation of Changes in Compensation Arrangements

	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
Compensation after 3 cuts (improvement)	0	0.74	0.54	1.10	0.53	1.22
Compensation after 5 cuts (decrement)	0	0	-1.52	0	-0.89	0
Current compensation but after 14 hrs	0	0	0	0	0	0
Compensation after 14 hours based on bill size	0	0	0	0	0	0
Higher compensation and automatic	0	0	0.91	0	0	0.45

In general business consumers find the levels of compensation insufficient. Some comments were made during the interviewing such as: *"The amounts are derisory,"* and *"The rate of compensation is pointless to me, even with the higher rate."*

6.6 Summary of Improvement Priorities

Table 45: Summary: Priorities Between Maintaining Current Services

	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
Compensation after 5 cuts (decrement)	0	0	-1.52	0	-0.89	0
Restoration within 60 hours (decrement)	-4.02	-5.51	-3.47	-4.73	-4.18	-4.27

Table 46: Summary: Priorities Among Improvement to Services

	Size			Experience of outages		Overall % of bill
	Large % of bill	Medium % of bill	Small % of bill	Cuts % of bill	No cuts % of bill	
Value of 40 minute reduction to average cut	4.93	4.86	6.72	5.91	6.06	5.77
Restoration within 24 hours (improvement)	3.83	4.87	5.85	4.82	5.27	4.86
Restoration within 36 hours (improvement)	2.90	4.12	4.25	4.14	3.92	3.88
Reducing major cuts to 1 every 5 years	0	3.41	4.47	3.96	3.24	3.60
Value per unplanned urban cut (reduction in frequency over 5 years from current)	3.58	3.93	3.06	2.43	4.95	3.52
Value of 20 minute reduction to average cut	2.47	2.43	3.36	2.96	3.03	2.88
Reducing major cuts to 1 every 2 years	0	2.05	2.85	2.60	1.90	2.23
Compensation after 3 cuts (improvement)	0	0.74	0.54	1.10	0.53	1.22
Callbacks during outage if required	0	0	1.73	0.87	0.85	0.87
Value per unplanned rural cut (reduction in frequency over 5 years from current)	0	0.46	0.84	0.88	0	0.54
Value per minute reduction to average cut	0.12	0.12	0.17	0.15	0.15	0.14
Higher compensation and automatic	0	0	0.91	0	0	0.45
Helpline	0	0	0	0	0	0
Current compensation but after 14 hrs	0	0	0	0	0	0
Compensation after 14 hours based on bill size	0	0	0	0	0	0

6.7 Regional Analysis

Individual DNO results were successfully obtained for the business segment and are shown in the appendices.

Regions are fairly consistent, with the most marked difference being the higher propensity of business consumers in Region 3 to value reductions in urban cuts and their negative response to increasing the maximum restoration time to 60 hours.

Table 47: Regional Variation in WTP

Variable	Region 1	Region 2	Region 3	Region 4	EDF Energy Networks (LPN)	Total (% of bill)
Value per unplanned rural cut (reduction in frequency over 5 years from current)	1.08	0.49	1.91	0.29	N/A	0.54
Value per unplanned urban cut (reduction in frequency over 5 years from current)	2.89	2.65	8.53	4.17	4.53	3.52
Value per minute reduction to average cut	0.18	0.11	0.00	0.16	0.12	0.14
Reducing major cuts to 1 every 2 years	2.71	1.54	1.61	3.07	N/A	2.23
Reducing major cuts to 1 every 5 years	4.38	3.20	2.73	4.20	N/A	3.60
Call backs during outage if required	0.00	0.80	1.04	0.80	0.00	0.87
Helpline	0.00	0.00	0.00	0.00	0.00	0.00
Maximum restoration time 60 hours (decrement)	-5.04	-3.99	-11.54	-4.02	N/A	-4.27
Maximum restoration time 36 hours (improvement)	3.87	4.61	4.96	3.77	N/A	3.88
Maximum restoration time 24 hours (improvement)	5.29	4.69	7.67	4.97	N/A	4.86
Compensation paid after 5 cuts (decrement)	0.00	-0.62	0.00	0.00	-3.4	0.00
Compensation paid after 3 cuts (improvement)	1.22	0.78	0.00	1.02	1.18	1.22
Current compensation but after 14 hrs	0.00	0.00	0.00	0.00	0.00	0.00
Compensation after 14 hours based on bill size	0.00	0.00	0.00	0.00	0.00	0.00
Higher compensation paid automatically	0.00	0.00	0.00	0.00	0.00	0.45

Region 1: WPD South West, WPD South Wales, SP Manweb
Region 2: EDF Energy Networks (EPN), EDF Energy Networks (SPN), Southern
Region 3: Central Networks (West), Central Networks (East), YEDL, NEDL, UU
Region 4: Scottish Power, Scottish Hydro.

6.8 Business Confidence Limits

These were calculated from the lower and upper 95% confidence limits of each coefficient used in the calculation of the value, as for the domestic segment.

Table 48: Business WTP confidence limits

Variable	WTP (% of bill)	Lower limit	Upper limit
Value per unplanned rural cut (reduction in frequency over 5 years from current)	0.54	0.39	0.71
Value per unplanned urban cut (reduction in frequency over 5 years from current)	3.52	3.29	3.87
Value per minute reduction to average cut	0.14	0.12	0.17
Reducing major cuts to 1 every 2 years	2.23	2.11	2.42
Reducing major cuts to 1 every 5 years	3.60	2.73	4.67
Call backs during outage if required	0.87	0.82	0.94
Helpline	0.00	0.00	0.00
Maximum restoration time 60 hours (decrement)	-4.27	-4.19	-4.45
Maximum restoration time 36 hours (improvement)	3.88	3.81	4.04
Maximum restoration time 24 hours (improvement)	4.86	4.77	5.06
Compensation paid after 5 cuts (decrement)	0.00	0.00	0.00
Compensation paid after 3 cuts (improvement)	1.22	1.19	1.27
Current compensation but after 14 hrs	0.00	0.00	0.00
Compensation after 14 hours based on bill size	0.00	0.00	0.00
Higher compensation paid automatically	0.45	0.44	0.47

6.9 Effect of External Events on Valuations

As for domestic consumers, the business sample was divided between those interviewed prior to 10th March and those interviewed after, and their WTP values compared to see if an affect could be attributed to external events. Caution is required in drawing conclusions from these results because only a small number of interviews were conducted before 10th March. Those interviewed in the later group place a higher value on improving maximum restoration times, and these differences lie outside of the ranges calculated from the 95% confidence limits, so this may reflect a real change in values. These values are highlighted in the table below.

Table 49: Effect of External Events on WTP

Variable	'Before' n=264	'After' n=1562	WTP (% of bill)
Value per unplanned rural cut (reduction in frequency over 5 years from current)	0.94	0.44	0.54
Value per unplanned urban cut (reduction in frequency over 5 years from current)	3.12	3.66	3.52
Value per minute reduction to average cut	0.08	0.16	0.14
Reducing major cuts to 1 every 2 years	2.40	2.23	2.23
Reducing major cuts to 1 every 5 years	3.59	3.63	3.60
Call backs during outage if required	1.91	0.68	0.87
Helpline	0.00	0.00	0.00
Maximum restoration time 60 hours (decrement)	-3.43	-4.72	-4.27
Maximum restoration time 36 hours (improvement)	3.54	4.16	3.88
Maximum restoration time 24 hours (improvement)	4.47	5.23	4.86
Compensation paid after 5 cuts (decrement)	0.00	0.00	0.00
Compensation paid after 3 cuts (improvement)	2.00	1.09	1.22
Current compensation but after 14 hrs	0.00	0.00	0.00
Compensation after 14 hours based on bill size	0.00	0.00	0.00
Higher compensation paid automatically	1.43	0.00	0.45

7. SUMMARY AND CONCLUSIONS

Business and domestic consumers both place a high priority on improvement in maximum restoration times. Domestic consumers are prepared to pay an additional £22, or 6% of the annual bill, for maximum restoration time to be reduced to 24 hours. Business consumers are prepared to pay 4.9% of the annual bill for the same improvement. Reducing maximum restoration time to 36 hours is also valued but to a lesser degree (3.9% for business, 4.4% for domestic consumers). An increase in maximum restoration times to 60 hours would be negatively regarded: domestic consumers would require a discount of £14 (3.7% of their annual bill); business consumers, 4.3% of their annual bill.

Significant improvements in network resilience are valued by some consumers but not others, but a major step change in network resilience such as major cuts being reduced to once every five years rather than once a year would be highly valued, but less so than improving restoration times. If major cuts affecting 1% of a DNO's consumers were reduced from an average of 1 per year to one every five years, business consumers would pay an additional 3.6% and domestic consumers an additional 3.9%.

Reducing the number of cuts is a high priority for consumers, but only if it affects their area. In the domestic market, both rural and urban consumers are prepared to pay around £20 for a cut avoided in their own area, but nothing towards reducing cuts elsewhere. Business consumers place much higher value on reducing urban cuts, which are likely to affect them, than on rural cuts; the average preparedness to pay is 3.5% of the bill for each urban cut avoided. The willingness to pay for reduction in rural cuts is much lower, 0.5% of their bill, and is driven mainly by small companies who are more likely to be affected by such outages.

A key priority for domestic consumers is to ensure that they receive accurate information during a power cut. Although most domestic consumers who experience a cut do not contact their distributor, and those who do have a relatively satisfactory experience, willingness to pay to ensure that information is updated every two hours to ensure accuracy is high. Domestic consumers are prepared to pay £22, or 6% of their total bill, for this improvement. This seems a high value for a service that most domestic consumers do not bother to use, and may be due to the implicit assumption in the evaluation that if it is not updated in this way the information they are given will not necessarily be accurate. There is no willingness to pay for a callback service. Domestic consumers show some altruism in being prepared to pay an additional 3% to pay for a helpline for consumers medically dependent on electrical equipment.

Most business consumers do not require improvements to information; only small companies show interest in a callback service, and their value is relatively low (1.7%). There is no value attached to a dedicated business helpline, possibly because business consumers are more likely to have experience of contacting their distributor during a power cut and almost all are able to get through and receive accurate information in a satisfactory amount of time.

Domestic and business consumers also highly value a reduction in the duration of power cuts. Reducing the average power cut by 40 minutes would be valued more highly than any other improvement by both domestic and business consumers. For domestic consumers, this improvement would be valued at £43.60, or 12% of the bill. A

reduction in the average length of cuts of 20 minutes would be valued at an equivalent level to the other two main domestic priorities, improving restoration times to 24 hours or to improving accurate information. For business consumers reducing average cut length by 40 minutes is valued at 5.8%, higher than the improvement of restoration times to 24 hours, while a reduction of 20 minutes is valued at 2.8%, slightly less than reducing the number of urban cuts.

Domestic consumers are not prepared to pay more for improvements to the multiple interruption standard. Currently compensation is paid after four or more cuts. Changing this to three or more has no value for domestic consumers, but they do expect a large discount if the standard is relaxed so that payments are made after 5 or more unplanned cuts; a discount of £21, or 5.7% of the bill, would be required in this case. Domestic consumers also see no value in a change so that compensation would be automatic only for the 18 hour standard, but automatic compensation for all standards does have some value (£5, 1.5% of total bill).

Businesses, in contrast, see some value in tightening the standard so that payments are made after three cuts or more (1.2%), but do not expect a discount if the standard is relaxed with payments made after 5 or more cuts. Of a number of different levels of compensation improvements tested, only the highest level, comprising automatic compensation on a 14 hour standard with amounts linked to bill size, was valued at all, and even then only marginally by small companies (less than 1% of the their total bill). In general, business consumers comment that compensation amounts are not adequate to make up for the business losses caused by power cuts.

Both rural and urban residents are prepared to pay towards undergrounding of the network in national parks and areas of outstanding natural beauty. For each percentage of the network undergrounded per year, consumers are prepared to pay about £2.50 per year, or 0.7% of the bill.

APPENDIX A

Business and Domestic Recruitment Questionnaires

Accent
Marketing & Research

1204 Final Main Phase 2 Business Recruitment Questionnaire

Recruiter name: | **Recruiter** | **Date number:** | **Recruited:**

Interviewer name: | **Interviewer** | **Date number** | **Questionnaire Int'vd number:**

URN number:

Time started: | **Time completed:** | **Interview number** | **Computer number**

Respondent Details

Respondent name: .....

Job title: .....

Company name: .....

Address: .....

.....

Tel No. .....

DNO & Show Material Sent

DNO: | Set 1: | Set 2

Appointment 1: Date & Time

Date of interview: ..... Time of interview: .....

Appointment 2: Date & Time

Date of interview: ..... Time of interview: .....

Appointment 3: Date & Time

Date of interview: ..... Time of interview: .....

Appointment 4: Date & Time

Date of interview: ..... Time of interview: .....

Introduction

Good morning/afternoon/evening. My name is …… and I am calling from Accent Marketing & Research. We are an independent market research company carrying out research on behalf of Ofgem, the gas and electricity industry regulator. Please could I speak to the person responsible paying the company's electricity bill? (**PROMPT IF NECESSARY**: this could be the company's Energy Manager, Facility Manager, Finance Director or Owner/Manager)

WHEN SPEAKING TO APPROPRIATE CONTACT, CONTINUE WITH EXPLANATION

Good morning/afternoon/evening. My name is …… and I am calling from Accent Marketing & Research. We are an independent market research company and I am carrying out research on behalf of Ofgem, the gas and electricity industry regulator. The research is looking at what improvements business and domestic customers would most like to see to the service supplied by electricity distribution companies. This is a bona fide market research exercise, which is being conducted under the Market Research Society Code of Conduct. As we are looking for a range of different people to take part in our research could you please spare 2 or 3 minutes to run through a couple of questions to see if you are in scope for the study?

Screening Questions

Q1. PLEASE ENTER WHETHER YOU HAVE BEEN REFERRED TO A HEAD OFFICE SITE OR WHETHER YOU ARE INTERVIEWING SOMEONE AT THE SITE ON THE SAMPLE

1. head office
2. sample site

Q1B **IF Q1 = 1 (IE HEAD OFFICE)** write town where site is located here (ie town on sample), **ELSE GO TO Q2.**

Town:.....

Q2. **ASK:** Could you please tell me the first half of: **READ OUT EITHER**

IF Q1=2 (SAMPLE SITE) "your postcode"

OR

IF Q1=1 (HEAD OFFICE REFERRAL) "the postcode of your **(READ OUT THE TOWN WHERE SITE ON SAMPLE IS LOCATED)** site"?

ENTER 1ST HALF; IE, IF SW14 2PG ENTER SW14; IF W1 5RT ENTER W1

Q3. Have you experienced any power cuts at: **READ OUT EITHER**

IF Q1 = 2 (SAMPLE SITE) "the company"
OR
IF Q1 = 1 (HEAD OFFICE REFERRAL) "that site"

…lasting more than 3 minutes in the last 12 months that you were not warned about?

1. yes
2. no
3. can't remember

CHECK QUOTAS AND PROCEED IF POSSIBLE

Q4. Is the maximum electricity demand for: **READ OUT EITHER**

IF Q1 = 2 (SAMPLE SITE) "your organisation"
OR
IF Q1 = 1 (HEAD OFFICE REFERRAL) "that site"

READ OUT RESPONSE CODES

1	1MW+	3	<100KW
2	100KW - <1MW	4	**DO NOT READ** don't know

CHECK QUOTAS AND PROCEED IF POSSIBLE

Q5. What is the approximate cost of:

IF Q1 = 2 (SAMPLE SITE) "your annual electricity bill"
OR
IF Q1 = 1 (HEAD OFFICE REFERRAL) "that site's annual electricity bill"

RECORD ACTUAL COST & BANDED COST

a) £ .....
b)

1	More than £159,000	3	<£15,000
2	£15,000-£159,000	4.	don't know

CHECK QUOTAS AND PROCEED IF POSSIBLE

Main Invitation

As I mentioned, we are carrying out a research study for Ofgem, the gas and electricity industry regulator. It is a very important study, the aim of which is to determine what improvements customers such as yourself would most like to see to the service supplied by electricity distribution companies. You are in scope for this research and we would greatly appreciate it if you were able to spare the time to give your views in a 30-minute interview which would be conducted by telephone at a time to suit you in the next few days. None of your comments will be attributed to you or your company personally and will only be used in grouped format. Would you be willing to take part?

IF Q5A IS BLANK (IE THEY WERE UNABLE TO PROVIDE ACTUAL – OR A GOOD ESTIMATE – OF COST) PLEASE CHECK THAT THEY WOULD BE ABLE TO FOR THE INTERVIEW ITSELF; IF NOT, THANK & CLOSE

IF RESPONDENT AGREES TO AN INTERVIEW, ASK THEM FOR THEIR PREFERRED DATE & TIME AND RECORD DETAILS ON FRONT SHEET. PLEASE INFORM THEM THAT YOU NEED TO SEND THEM SOME MATERIAL TO REFER TO AND ASK IF THEY WOULD PREFER TO HAVE IT FAXED, EMAILED OR POSTED. RECORD PREFERRED DETAILS BELOW.

FAX NO......

EMAIL ADDRESS: .....

COMPANY NAME: .....

ADDRESS:.....

.....

I confirm that this interview was conducted under the terms of the MRS code of conduct and is completely confidential
Interviewer's signature: .....

1204
Final Main Phase 2 Consumer Recruitment Questionnaire

Interviewer name:		**Interviewer**		**Date**		**Questionnaire Int'vd number:**	
Time started:		**Time completed:**		**Respondent number**		**Computer number**	

Respondent Details

Respondent name: .....

Address: .....

.....

Tel No. .....

Introduction

Good morning/afternoon/evening. My name is …… and I work for Accent Marketing & Research. We are an independent market research company carrying out research on behalf of Ofgem, the gas and electricity industry regulator. Please could I speak to the person responsible – either jointly or solely – for paying the electricity bill?

WHEN SPEAKING TO APPROPRIATE CONTACT, CONTINUE

(Good morning/afternoon/evening. My name is …… and I work for Accent Marketing & Research. We are an independent market research company and I am carrying out research on behalf of Ofgem, the gas and electricity industry regulator.) The research is looking at what improvements domestic and business customers would most like to see to the service supplied by electricity distribution companies. This is a bona fide market research exercise, which is being conducted under the Market Research Society Code of Conduct. As we are looking for a range of different people to take part in our research could you please spare 2 or 3 minutes to run through a couple of questions to see if you are in scope for the study?

Screening Questions

Q6. DO NOT ASK; RECORD WHETHER INTERVIEWING IN A RURAL OR URBAN AREA.

1. rural
2. urban

Q7. Do you or any members of your family work in market research, journalism, PR or the electricity industry?

1. yes **THANK AND CLOSE**
2. no

Q8. **ASK:** Could you please tell me the first half of your postcode? **IF POSTCODE IS SW14 2PG ENTER SW14; IF POSTCODE IS W1 5RT ENTER W1.**.

Q9. Have you experienced any power cuts lasting more than 3 minutes over the last 5 years that you were not warned about?

1. yes
2. no
3. can't remember **CODE AS "NO" FOR QUOTAS**

CHECK QUOTAS AND PROCEED IF POSSIBLE

Q10. Into which of the following age bands do you fall?

1. 16-19 } 1
2. 20-29 }
3. 30-39 } 2
4. 40-49 }
5. 50-59 } 3
6. 60+ }
7. refused/not stated

CHECK QUOTAS AND PROCEED IF POSSIBLE

Q11. What is the occupation of the chief wage earner in your household?

.....

CODE SEG ACCORDINGLY

1. AB
2. C1C2
3. DE

CHECK QUOTAS AND PROCEED IF POSSIBLE

Q12. How much do you pay annually for your electricty?

£ .....

Main Invitation

As I mentioned, we are carrying out a research study for Ofgem, the gas and electricity industry regulator. It is a very important study designed to determine what improvements customers such as yourself would most like to see to the service supplied by electricity distribution companies. You are in scope for this research and we would greatly appreciate it if you were able to spare the time to give your views in a 30-minute interview which could either be conducted now, or at a time to suit you. None of your comments will be attributed to you personally and will only be used in grouped format. Would you be willing to take part?

IF Q7 IS BLANK (IE THEY WERE UNABLE TO PROVIDE ACTUAL – OR A GOOD ESTIMATE – OF COST) PLEASE CHECK THAT THEY WOULD BE ABLE TO FOR THE INTERVIEW ITSELF; IF NOT, THANK & CLOSE

IF RESPONDENT AGREES TO AN IMMEDIATE INTERVIEW PROCEED TO MAIN COMPUTER INTERVIEW

IF RESPONDENT AGREES TO AN INTERVIEW AT A LATER DATE, ASK THEM FOR THEIR PREFERRED DATE & TIME AND RECORD BELOW.

.....DATE: .....

.....TIME: .....

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

Interviewer's signature: .....

APPENDIX B

Domestic Questionnaires

Phase 2 Main Consumer

INTERVIEWER DETAILS

Q 1 STATUS

INTERVIEWER: IS THIS A REAL OR PRACTICE INTERVIEW?

real interview
practice interview

Q 3 INTNO

INTERVIEWER: PLEASE ENTER YOUR FOUR DIGIT INTERVIEWER NUMBER

L 1000
H 9999

Q 3 QNO

INTERVIEWER: PLEASE ENTER THE RECRUITMENT QUESTIONNAIRE NUMBER

L 1
H 9999

Q 1 DNO

INTERVIEWER: PLEASE ENTER THE DNO AREA THAT YOU ARE SURVEYING IN

Aquila
EPN (EDF)
EME
Manweb (SP)
NEDL
Scottish Hydro Electric
Scottish Power
Southern Electric
SPN (EDF)
United Utilities
WPD South-Wales
WPD South-West
YEDL

Q 1 DNOCHECK

INTERVIEWER: YOU ARE INTERVIEWING A RESPONDENT FROM THE #DNO# AREA

IS THIS CORRECT?
yes
no

IF #DNOCHECK# EQ 1 GO TO RURALURBAN
IF #DNOCHECK# EQ 2 GO TO DNO

Q 1 RURALURBAN

INTERVIEWER: PLEASE ENTER WHETHER YOU ARE SURVEYING IN A RURAL OR URBAN AREA

rural
urban

MAIN INTERVIEW: Background

Q 0 INTRO

Thank you for agreeing to take part in this survey. As I have said, any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society.

You do not have to answer questions you do not wish to and you can terminate the interview at any point.

Q 2 POSTCODE
Can I begin by asking you for the first half of your postcode, as this will help with our analysis.

INTERVIEWER: PLEASE ENTER THE FIRST HALF OF THE POSTCODE, eg: IF FULL POSTCODE IS RG12 8QT PLEASE ENTER RG12; IF FULL POSTCODE IS RG1 5TT PLEASE ENTER RG1

Q 0 INTRO2
This interview is about electricity distribution rather than supply. In other words, it is about the company that runs the local network of wires or cables that transmit electricity, rather than the company that you pay the bills to. Because they are the ones who are responsible for the wires, they are also responsible for:

* restoring the power supply if there is a power cut
* operating a safety & security enquiry service for any problems with live cables
* connecting customers to their local network
* and investigating any complaints or problems that customers have regarding their electricity distribution service.

Q 5 ELECBILL
Can you please tell me what you pay each year for your electricity?

INTERVIEWER: IT IS ESSENTIAL TO GET THIS INFORMATION. IF THE RESPONDENT KNOWS A MONTHLY AMOUNT MULTIPLY THIS BY 12; IF THEY KNOW A QUARTERLY AMOUNT MULTIPLY THIS BY 4 (BUT TRY TO GET A DISTINCTION BETWEEN WINTER AND SUMMER MONTHS AND CALCULATE ACCORDINGLY).

L 1
H 999999

Q 1 BILLCHECK
Your electricity bill for the year is roughly, or exactly, #ELECBILL#. Is this correct?

yes
no

IF #BILLCHECK# EQ 1 GO TO BILLCALC
IF #BILLCHECK# EQ 2 GO TO ELECBILL

Q 5 BILLCALC
V 5 BILLCAL
M BILLCAL [= #ELECBILL# P 24]

Q 0 DISTBILL
About 24% of your current electricity bill currently goes towards electricity distribution, which means that, for you, about #BILLCALC# of your annual bill goes towards distribution.

S EXPERIENCES

Q 0 INTRO3
The remainder of this questionnaire is split into a number of sections. In the first section I would like to look at your experiences with respect to electricity distribution issues.

Firstly, can you tell me if you have experienced any of the following in the past 12 months:

Q 1 Q1
Any unplanned power cuts lasting more than 3 minutes, ie any that you were not warned about?

yes
no
don't know/can't remember

Q 3 Q2

IF #Q1# NE 1 GO TO Q4
How many of these unplanned cuts have you had in the past twelve months?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 3 Q3
On the last occasion that you had an unplanned power cut in excess of 3 minutes, how long did it last?

INTERVIEWER: RECORD IN MINUTES (eg 1 HOUR = 60, 2 HOURS 120 ETC); RECORD 9999 FOR DON'T KNOW
L 1
H 9999

Q 1 Q4
And have you experienced any planned power cuts (ie ones that you were given advance warning of) lasting more than 3 minutes in the past 12 months?

yes
no
don't know/can't remember

Q 3 Q5
IF #Q4# NE 1 GO TO Q7
How many of these planned cuts have you had in the past twelve months?

T INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 3 Q6
On the last occasion that you had a planned power cut in excess of 3 minutes, how long did it last?

INTERVIEWER: RECORD IN MINUTES (eg 1 HOUR = 60, 2 HOURS 120 ETC); RECORD 9999 FOR DON'T KNOW
L 1
H 9999

Q 1 Q7
IF #Q1# NE 1 GO TO Q13
On the last occasion that you experienced an unplanned power cut, did you try and contact your electricity distributor?

yes
no
don't know

Q 1 Q8
IF #Q7# NE 1 GO TO Q13
Did you manage to get through?

yes
no
don't know/can't remember

Q 3 Q9
IF #Q8# NE 1 GO TO Q13
How long did you take to get through initially, whether to an automated message or a person?
DO NOT PROMPT

INTERVIEWER: RECORD IN SECONDS; RECORD 999 FOR DON'T KNOW

L 1
H 999

Q 1 Q10
Did you get an:

1. Automated message
2. Speak to someone
3. Both

Automated message
Spoke to someone
Both
don't know/can't remember

Q 1 Q11
Did you get the information you wanted?

yes
no
don't know/can't remember

Q 1 Q12
IF #Q11# NE 1 GO TO Q13
Was the information about the power cut correct?

yes
no
don't know/can't remember

EXPECTATIONS ABOUT POWER SUPPLY

Q 1 Q13
Do you believe that it is reasonable for a power cut to occur in a major storm?

yes
no
don't know/not stated

Q 3 Q14
And what is the maximum number of an unplanned power cuts lasting more than three 5hours that a company should be allowed in any one year before compensation is paid to their customers?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 1 Q15
In normal conditions, how quickly would you expect power to be restored following an unplanned power cut?

DO NOT PROMPT

1. within 1 hour
2. within 2-3 hours
3. within 4-5 hours
4. within 6-10 hours
5. within 11-15 hours
6. within 16-18 hours
7. 18 hours or more

within 1 hour
2-3 hours

4-5 hours
6-10 hours
11-15 hours
16-18 hours
18 hours or more
don't know

Q 3 Q16
And in normal conditions, after how long (ie after how many hours of a power cut) should a distributor be required to pay compensation to a consumer?

INTERVIEWER: IF RESPONDENT SAYS "IMMEDIATELY" PLEASE ENTER "0

L 0
H 999

Q 3 Q17
If there had been a major storm affecting 1% of customers in your distribution company's area, how quickly would you expect power to be restored in such a case, to the nearest hour?

DO NOT PROMPT

ENTER RESPONSE IN HOURS OR 999 FOR DON'T KNOW

L 1
H 999

Q 1 Q18
Do you think that distribution companies should be doing more to reduce the impact of severe weather on their networks?

yes
no
don't know

ATTITUDES TOWARDS STANDARDS & TARGETS

Q 0 INTRO4
Ofgem, the regulator for the gas and electricity market, has put in place a number of standards which distributors are required to meet. If they fail to meet them then customers are entitled to compensation. I am going to run through some of the standards and ask a question about each?

Q 1 Q19
Distributors should restore consumers' supplies within 18 hours following unplanned interruptions. Failure to do so results in a penalty payment of £50 for domestic customers for the first 18 hrs plus £25 for each additional 12 hours.

Were you aware of this standard?

yes
no
can't remember

Q 1 Q20
Consumers are entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year

Were you aware of this Standard?

yes
no
can't remember

Q 1 Q21
Consumers must be given at least 2 days notice of a planned power cut. Failure to do so results in a penalty payment of £20 for domestic consumers.

Were you aware of this standard?

yes
no
can't remember

STATED PREFERENCE

Q 0 SPINTRO1A
I am now going to go through four exercises with you, each of which will look at your preferences for a number of changes that distribution companies could make to the service that they provide.

The first will look at:

the number of power cuts greater than 3 minutes experienced in rural areas over 5 years
the number of power cuts greater than 3 minutes experienced in urban areas over 5 years
and the average length of these power cuts.

Q 0 SPINTRO1B
You will be presented with six sets of choice pairs and will be asked in each case to say whether you prefer Option A or B. You may not like either, but please say which you would prefer in each instance.

* variable 1 DESIGN (Number of power cuts (3 mins) in rural areas over 5 years

More power cuts in rural areas:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA+1/2/3) over 5 years

The same number of power cuts in rural areas:- ie an average of (DNO SPECIFIC DATA) in 5 years

Fewer power cuts in rural areas:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA –1/2/3)over 5 years

* variable 2 design (Number of power cuts (3 mins) in urban areas over 5 years

More power cuts in urban areas:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +1)over 5 years

The same number of power cuts in urban areas:- ie an average (DNO SPECIFIC DATA) cuts in 5 years

Fewer power cuts in urban areas:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA -1)over 5 years

* variable 3 design (Average length of power cuts (3 mins) experienced by customers:)

Longer average power cut duration:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +5/10/15/20) minutes

No change in average power cut duration:- ie an average of (DNO SPECIFIC DATA) minutes

Shorter average power cut duration:- ie from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA –5/10/15/20) minutes

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO2A

In this second exercise we are going to look at:

the ability of the distribution networks to withstand major storms and their ability to restore customers' power quickly following major damage to their network

provision of information during a power cut

and undergrounding overhead lines to reduce the visual impact of these overhead lines

You will see that for the first of these we talk about your local company's electricity system being designed and operated so that the likelihood of more than 1% of its customers losing power for more than 24 hours following a major storm is reduced. Please note that 1% of your distributors customers is (DNO SPECIFIC DATA).

Please also note that when we refer to overhead lines we are talking about these (show SHOWCARD A)

Q 0 SPINTRO2B
With this in mind, which of the following would you prefer?

G B 1 GAME2
* variable 1 DESIGN (electricity system)
Your local company's electricity system will be designed and operated so that the likelihood of more than 1% of its customers losing power for more than 24 hours following a major storm is once a year, as now

Your local company's electricity system will be designed and operated so that the likelihood of more than 1% of its customers losing power for more than 24 hours following a major storm is once **every 2 years**, better than now

Your local company's electricity system will be designed and operated so that the likelihood of more than 1% of its customers losing power for more than 24 hours following a major storm is once **every 5 years**, better than now

* variable 2 design (Provision of information)

Current level of information:
- (DNO SPECIFIC DATA) of callers receive information by automated message
(DNO SPECIFIC DATA) of callers are answered by a person on average in (DNO SPECIFIC DATA) seconds (this including some customers who have already heard an automated message)

Current level of information provision during a power cut, **but with information given by the automated message or operator being updated every 2 hours to ensure that is accurate**

Current level of information provision during a power cut, **but with call backs to you by a person to provide information updates, if requested**

Current level of information provision during a power cut, **plus a dedicated helpline for customers dependent on medical equipment requiring an electricity supply**

* variable 3 design (Undergrounding for environmental visual amenity reasons:)

No additional overhead lines to be undergrounded to reduce the visual impact of these overhead lines

An ongoing commitment to undergrounding **#G2V3L2A#** of overhead lines per annum in areas of outstanding natural beauty and national parks until all are undergrounded

An ongoing commitment to undergrounding **#G2V3L2B#** of overhead lines per annum in areas of outstanding natural beauty and national parks until all are undergrounded

An ongoing commitment to undergrounding **#G2V3L2C#** of overhead lines per annum in areas of outstanding natural beauty and national parks until all are undergrounded

*Percentage undergrounded range from 2.5% to 7.5%

Which choice would you prefer?
CHOICE A

CHOICE B

Q 0 SPINTRO3A
We are now going to look at:

the maximum time taken to restore customers following storms

the number of UNPLANNED interruptions greater than 3 hours which would entitle you to a compensation payment

automatic compensation arrangements

Q 0 SPINTRO3B
When considering these options please be aware that, with respect to UNPLANNED interruptions greater than 3 hours, consumers are currently entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year.

And with respect to the compensation arrangements, currently consumers have to claim compensation under all Ofgem interruption standards, it is not given automatically.

Q 0 SPINTRO3C
With this in mind, which of the following would you prefer?

G B 1 GAME3
* variable 1 DESIGN (Maximum time taken to restore customers following storms)

The maximum time taken to restore customers following storms would be within 60 hours, worse than now

The maximum time taken to restore customers following storms would be within 48 hours as now

The maximum time taken to restore customers following storms would be within 36 hours, better than now

The maximum time taken to restore customers following storms would be within 24 hours, better than now

* variable 2 design (Number of UNPLANNED interruptions greater than 3 hours which entitles you to a compensation payment is:)

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be worse than now at 5 or more interruptions

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be as now, ie or more interruptions

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be better than now at 3 or more interruptions

* variable 3 design (Automatic compensation)

Current compensation arrangements would apply, ie customers have to claim compensation under ALL the interruption standards after the supply has been restored

There is automatic compensation for the 18 hour interruption standard but **not** for the planned interruption and multiple interruption standards

There is automatic compensation for ALL interruption standards

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO4A
In this final exercise you will see both the best and worse options of all areas that we have just looked at in the first three exercises.

In addition, because no improvements would be possible without investment by the distribution companies – and consequently an increase in your electricity bill - you will also see the impact that the improvements shown would have on your overall electricity bill in year one and in subsequent years.

Bearing this in mind, and referring to the showcard for the full definitions of each level shown on the screen, we would once again like you to say which of the options you would prefer, A or B.

INTERVIEWER: IT IS ESSENTIAL THAT YOU SHOW THE RESPONDENT THE RELEVANT FULL LEVELS ON SHOWCARD B AS WELL AS SHOWING THEM THE SCREEN

G B 1 GAME4A
* variable 1 DESIGN (EXERCISE 1 LEVELS)
* level 1 best Ex 1 package
Fewer rural cuts over 5 years: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA)

Fewer urban cuts over 5 years: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA)

Shorter average cut duration: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA) minutes

* level 2 worst Ex 1 package
More rural cuts over 5 years: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA)

More urban cuts over 5 years: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA)

Longer average cut duraion: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA) minutes

* variable 2 design (EX 2 LEVELS)
* BEST PACKAGE GAME2
• Likelihood of 1% customers losing power for 24 hours following a major storm is once every 5 years, better than now
• Current information provision on cut, plus a dedicated helpline for customers dependent on electricity for medical reasons
• Ongoing commitment to undergrounding #G2V3L2C# of overhead lines pa in national parks and areas of natural beauty

* WORST PACKAGE 2
• Likelihood of 1% customers losing power for 24 hours following a major storm is once a year, as now
• Current level of information provision during a cut
• No additional overhead lines to be undergrounded to reduce visual impact

* variable 3 design (EX 3 LEVELS)
* BEST EX 3 PACKAGE
• Maximum restoration time following a storm better than now: within 24 hours
• Number of **unplanned** interruptions 3 hours entitling you to compensation: better than now at 3 or more
• Automatic compensation for ALL interruption standards

* WORST EX 3 PACKAGE
• Maximum restoration time following a storm worse than now: within 60 hours
• Number of **unplanned** interruptions 3 hours entitling you to compensation worse than now at 5 or more
• Current compensation arrangements ie customers have to claim

G O 3 2
* VARIABLE 4 - COST
* LEVEL 1 - 1%-4% decreases
* LEVEL 2 - current
* LEVEL 3 - 1%-4% increases
* LEVEL 4 - 5%-8% increases

Your annual electricity bill would decrease from **CURRENT BILL** to **CURRENT BILL – LEVEL 1**

Your annual electricity bill would stay the same **CURRENT BILL**

Your annual electricity bill would increase from **CURRENT BILL** to **CURRENT BILL + LEVEL 3**

Your annual electricity bill would increase from **CURRENT BILL** to **CURRENT BILL + LEVEL 4**

Which choice would you prefer?
CHOICE A
CHOICE B

RELATIVE PRIORITIES

Q 1 Q22
Thank you for going through those exercises with me.

Could you now tell me how you would feel if you were to get an additional power cut over the next 12 months that you were not warned about? Please use a scale of 1 to 4, where 1 is equal to extremely unhappy, 2 to very unhappy, 3 to quite unhappy and 4 to indifferent.

extremely unhappy
very unhappy
quite unhappy
indifferent

Q 10 Q23
And using the same scale, how would you feel if you were to get an additional power cut over the next 12 months that you were warned about?

Q 1 Q24
And how would you feel if the length of the power cut was to increase from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +20)MINS?

extremely unhappy
very unhappy
quite unhappy
indifferent

Q 1 Q25
If you were to call your distribution company in the event of a power cut and were to receive an automated message providing information about the cut and measures being taken to address it, would you then prefer to hold for an operator to report the cut or receive further information, or would you prefer to be able to call back on a dedicated priority number. Calls to the dedicated number would be likely to be answered more quickly because of the smaller volume of calls to that number.

prefer to hold
prefer to call back
neither, auto message enough
Don't know

DEMOGRAPHICS & CONTEXTUAL QUESTIONS

Q 1 Q26
Finally I would like to ask you a couple of questions to help with the analysis of this survey. First, do you have any health problems, a disability or a long term illness that restricts your daily activities or the work that you do?

yes
No
Refused

Q 3 Q27
How many, if any, children do you have in your household under the age of 5?
L 0
H 50

Q 1 Q28
And which of the following best describes your total annual household income, before tax and other deductions?

under £10,000
£10,000 - £20,000
£20,001 - £30,000
£30,001 - £40,000
£40,001 - £50,000
£50,001 - £60,000
over £60,000
Don't know
Refused

Q 1 Q29
Which of the following age bands do you fall into?

NOTE: THIS CAN BE RECORDED FROM THE RECRUITMENT QUESTIONNAIRE IF YOU HAVE IT TO HAND.

16-19
20-29
30-39
40-49
50-59
60+
Refused/ns

Q 1 Q30
And what is the occupation of the chief wage earner in your household?

NOTE: THIS CAN BE RECORDED FROM THE RECRUITMENT QUESTIONNAIRE IF YOU HAVE IT TO HAND.

IF NOT, ENTER RESPONSE IN NOTEPAD AND CODE SEG BELOW ACCORDINGLY

AB (occ. in NOTE)
C1C2 (occ. in NOTE)
DE (occ. in NOTE)
Don't know (occ. in NOTE)
Refused

Q 1 Q31
INTERVIEWER: CODE GENDER OF RESPONDENT.(DO NOT ASK)

Male
Female

END OF INTERVIEW

Q 0 ThankU
THAT WAS THE LAST QUESTION.

Please can I take a note of your name and telephone number for quality control purposes

---

Q 2 NAME
Respondent name:

Q 2 WkTel
Home Telephone:

Q 0 END
That was the last question. Thank you very much for taking part in this research.

INTERVIEWER: HAND RESPONDENT THANK YOU LETTER AND INCENTIVE.

Q 1 STATUS2

INTERVIEWER: PLEASE RE-ENTER WHETHER REAL OR PRACTICE INTERVIEW

real interview
practice interview

Q 1 MRSCODE
INTERVIEWER: DO YOU CONFIRM THAT THIS INTERVIEW WAS CONDUCTED UNDER THE TERMS OF THE MARKET RESEARCH SOCIETY CODE OF CONDUCT AND IS COMPLETELY CONFIDENTIAL

Yes
No

Phase 2 MAIN Consumer - LPN only

INTERVIEWER DETAILS

Q 1 STATUS

INTERVIEWER: IS THIS A REAL OR PRACTICE INTERVIEW?

real interview
practice interview

Q 3 INTNO

INTERVIEWER: PLEASE ENTER YOUR FOUR DIGIT INTERVIEWER NUMBER

L 1000
H 9999

Q 3 QNO

INTERVIEWER: PLEASE ENTER THE RECRUITMENT QUESTIONNAIRE NUMBER

L 1
H 9999

Q 1 DNO

INTERVIEWER: PLEASE ENTER THE DNO AREA THAT YOU ARE SURVEYING IN

LPN (EDF)

MAIN INTERVIEW: Background

Q 0 INTRO
Thank you for agreeing to take part in this survey. As I have said, any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society.

You do not have to answer questions you do not wish to and you can terminate the interview at any point.

Q 2 POSTCODE
Can I begin by asking you for the first half of your postcode, as this will help with our analysis.

INTERVIEWER: PLEASE ENTER THE FIRST HALF OF THE POSTCODE, eg:
IF FULL POSTCODE IS RG12 8QT PLEASE ENTER RG12
IF FULL POSTCODE IS RG1 5TT PLEASE ENTER RG1

Q 0 INTRO2
This interview is about electricity distribution rather than supply. In other words, it is about the company that runs the local network of wires or cables that transmit electricity, rather than the company that you pay the bills to. Because they are the ones who are responsible for the wires, they are also responsible for:

* restoring the power supply if there is a power cut
* operating a safety & security enquiry service for any problems with live cables
* connecting customers to their local network
* and investigating any complaints or problems that customers have regarding their electricity distribution service.

Q 5 ELECBILL
Can you please tell me what you pay each year for your electricity?

INTERVIEWER: IT IS ESSENTIAL TO GET THIS INFORMATION. IF THE RESPONDENT KNOWS A MONTHLY AMOUNT
MULTIPLY THIS BY 12; IF THEY KNOW A QUARTERLY AMOUNT MULTIPLY THIS BY 4 (BUT TRY TO GET A DISTINCTION BETWEEN WINTER AND SUMMER MONTHS AND CALCULATE ACCORDINGLY).

L 1
H 999999

Q 1 BILLCHECK

Your electricity bill for the year is roughly, or exactly, #ELECBILL#. Is this correct?

Yes
No

IF #BILLCHECK# EQ 1 GO TO BILLCALC
IF #BILLCHECK# EQ 2 GO TO ELECBILL

Q 5 BILLCALC
V 5 BILLCAL
M BILLCAL [= #ELECBILL# P 24]
F 1 #BILLCAL#

Q 0 DISTBILL
About 24% of your current electricity bill currently goes towards electricity distribution, which means that, for you, about #BILLCALC# of your annual bill goes towards distribution.

EXPERIENCES

Q 0 INTRO3
The remainder of this questionnaire is split into a number of sections. In the first section I would like to look at your experiences with respect to electricity distribution issues.

Firstly, can you tell me if you have experienced any of the following in the past 12 months:

Q 1 Q1
Any unplanned power cuts lasting more than 3 minutes, ie any that you were not warned about?

Yes
No
Don’t know/can't remember

Q 3 Q2
IF #Q1# NE 1 GO TO Q4
How many of these unplanned cuts have you had in the past twelve months?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 3 Q3
On the last occasion that you had an ^C15unplanned^C07 power cut in excess of 3 minutes, how long did it last?

INTERVIEWER: RECORD IN MINUTES (eg 1 HOUR = 60, 2 HOURS 120 ETC); RECORD 9999 FOR DON'T KNOW

L 1
H 9999

Q 1 Q4
And have you experienced any planned power cuts (ie ones that you were given advance warning of) lasting more than 3 minutes in the past 12 months?

Yes
No
Don’t know/can't remember

Q 3 Q5

IF #Q4# NE 1 GO TO Q7
How many of these planned cuts have you had in the past twelve months?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 3 Q6
On the last occasion that you had a planned power cut in excess of 3 minutes, how long did it last?

INTERVIEWER: RECORD IN MINUTES (eg 1 HOUR = 60, 2 HOURS 120 ETC); RECORD 9999 FOR DON'T KNOW

L 1
H 9999

Q 1 Q7
IF #Q1# NE 1 GO TO Q13
On the last occasion that you experienced an unplanned power cut, did you try and contact your electricity distributor?

Yes
No
Don’t know

Q 1 Q8
IF #Q7# NE 1 GO TO Q13
Did you manage to get through?

Yes
No
Don’t know/can't remember

Q 3 Q9
IF #Q8# NE 1 GO TO Q13
How long did you take to get through initially, whether to an automated message or a person?

DO NOT PROMPT

INTERVIEWER: RECORD IN SECONDS; RECORD 999 FOR DON'T KNOW

L 1
H 999

Q 1 Q10
Did you get an:

1. Automated message
2. Speak to someone
3. Both
Automated message
Spoke to someone
Both
Don’t know/can't remember

Q 1 Q11
Did you get the information you wanted?

Yes
No
Don’t know/can't remember

Q 1 Q12

IF #Q11# NE 1 GO TO Q13
Was the information about the power cut correct?

Yes
No
Don’t know/can't remember

EXPECTATIONS ABOUT POWER SUPPLY

Q 1 Q13
Do you believe that it is reasonable for a power cut to occur in a major storm?
Yes
No
Don’t know/not stated

Q 3 Q14
And what is the maximum number of unplanned power cuts lasting more than three hours that a company should be allowed in any one year before compensation is paid to their customers?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 1 Q15
In normal conditions, how quickly would you expect power to be restored following an unplanned power cut?

DO NOT PROMPT

1. within 1 hour
2. within 2-3 hours
3. within 4-5 hours
4. within 6-10 hours
5. within 11-15 hours
6. within 16-18 hours
7. 18 hours or more

within 1 hour
2-3 hours
4-5 hours
6-10 hours
11-15 hours
16-18 hours
18 hours or more
Don’t know

Q 3 Q16
And in normal conditions, after how long (ie after how many hours of a power cut) should a distributor be required to pay compensation to a consumer?

INTERVIEWER: IF RESPONDENT SAYS "IMMEDIATELY" PLEASE ENTER "0

L 0
H 999

Q 3 Q17
If there had been a major storm affecting 1% of customers in your distribution company's area, how quickly would you expect power to be restored in such a case, to the nearest hour?

DO NOT PROMPT

ENTER RESPONSE IN HOURS OR 999 FOR DON'T KNOW

L 1
H 999

Q 1 Q18
Do you think that distribution companies should be doing more to reduce the impact of severe weather on their networks?

Yes
No
Don't know

ATTITUDES TOWARDS STANDARDS & TARGETS

Q 0 INTRO4
Ofgem, the regulator for the gas and electricity market, has put in place a number of standards which distributors are required to meet. If they fail to meet them then customers are entitled to compensation. I am going to run through some of the standards and ask a question about each?

Q 1 Q19
Distributors should restore consumers' supplies within 18 hours following unplanned interruptions. Failure to do so results in a penalty payment of £50 for domestic customers for the first 18 hrs plus £25 for each additional 12 hours.

Were you aware of this standard?

Yes
No
A can't remember

Q 1 Q20
Consumers are entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year

Were you aware of this Standard?

Yes
No
A can't remember

Q 1 Q21
Consumers must be given at least 2 days notice of a planned power cut. Failure to do so results in a penalty payment of £20 for domestic consumers.

Were you aware of this standard?

Yes
No
can't remember

STATED PREFERENCE

Q 0 SPINTRO1A
I am now going to go through three exercises with you, each of which will look at your preferences for a number of improvements that distribution companies could make to the service that they provide.

The first will look at:

- the number of power cuts greater than 3 minutes experienced in urban areas over 5 years
- the average length of these power cuts and
- the provision of information during a power cut.

Q 0 SPINTRO1B

You will be presented with six sets of choice pairs and will be asked in each case to say whether you prefer Option A or B. You may not like either, but please say which you would prefer in each instance.

GAME1
* variable 1 DESIGN (Number of power cuts (3 mins) in urban areas over 5 years:)
More power cuts in urban areas:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +1)over 5 years

The same number of power cuts in urban areas:- ie an average (DNO SPECIFIC DATA) cuts in 5 years

Fewer power cuts in urban areas:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA -1)over 5 years

* variable 2 design (Average length of power cuts (3 mins) experienced by customers:)

Longer average power cut duration:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +5/10/15/20) minutes

No change in average power cut duration:- ie an average of (DNO SPECIFIC DATA) minutes

Shorter average power cut duration:- ie from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA – 5/10/15/20) minutes

* variable 3 design (Provision of information)

Current level of information: **28%** of callers receive information by automated message

45% of callers are answered by a person on average in **62** seconds (this including some customers who have already heard an automated message)

Current level of information provision during a power cut, **but with information given by the automated message or operator being updated every 2 hours to ensure that it is accurate**

Current level of information provision during a power cut, **but with call backs to you by a person to provide information updates, if requested**

Current level of information provision during a power cut, **plus a dedicated helpline for customers dependent on medical equipment requiring an electricity supply**

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO2A

We are now going to look at:

the number of UNPLANNED interruptions greater than 3 hours which would entitle you to a compensation payment automatic compensation arrangements and undergrounding overhead lines to reduce the visual impact of these overhead lines.

Q 0 SPINTRO2C
When considering these options please be aware that, with respect to UNPLANNED interruptions greater than 3 hours, consumers are currently entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year.

And with respect to the compensation arrangements, currently consumers have to claim compensation under all Ofgem interruption standards, it is not given automatically.

Please also note that when we refer to overhead lines we are talking about these (show SHOWCARD A)

Q 0 SPINTRO2D

With this in mind, which of the following would you prefer?

* variable 1 design (Number of UNPLANNED interruptions greater than 3 hours which entitles you to a compensation payment is:)

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be worse than now at 5 or more interruptions

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be as now, ie 4 or more interruptions

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be better than now at 3 or more interruptions

* variable 2 design (Automatic compensation)
Current compensation arrangements would apply, ie customers have to claim compensation under ALL the interruption standards after the supply has been restored

There is automatic compensation for the 18 hour interruption standard but **not** for the planned interruption and multiple interruption standards

There is automatic compensation for ALL interruption standards

* variable 3 design (Undergrounding for environmental visual amenity reasons:)

No additional overhead lines to be undergrounded to reduce the visual impact of these overhead lines

An ongoing commitment to undergrounding **#G2V3L2A#** of overhead lines per annum in areas of outstanding natural beauty and national parks until all are undergrounded

An ongoing commitment to undergrounding **#G2V3L2B#** of overhead lines per annum in areas of outstanding natural beauty and national parks until all are undergrounded

An ongoing commitment to undergrounding **#G2V3L2C#** of overhead lines per annum in areas of outstanding natural beauty and national parks until all are undergrounded

*Percentage undergrounded range from 2.5% to 7.5%

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO3A
In this final exercise you will see both the best and worse options of all areas that we have just looked at in the first two exercises.

In addition, because no improvements would be possible without investment by the distribution companies – and consequently an increase in your electricity bill - you will also see the impact that the improvements shown would have on your overall electricity bill in year one and in subsequent years.

Bearing this in mind, and referring to the showcard for the full definitions of each level shown on the screen, we would once again like you to say which of the options you would prefer, A or B.

INTERVIEWER: **IT IS ESSENTIAL** THAT YOU SHOW THE RESPONDENT THE RELEVANT FULL LEVELS ON SHOWCARD B AS WELL AS SHOWING THEM THE SCREEN

G B 1 GAME3A
* variable 1 DESIGN (EXERCISE 1 LEVELS)
* level 1 best Ex 1 package

Fewer urban cuts over 5 years: from 2 to 1

Shorter average cut duration: from 112 to #G1V2XA2# minutes

Current information provision on cut, plus a dedicated helpline for customers dependent on electricity for medical reasons

* level 2 worst Ex 1 package

More urban cuts over 5 years: from 2 to 3

Longer average cut duration: from 112 to #G1V2XA3# minutes

Current level of information provision during a cut

* variable 2 design (EX 2 LEVELS)
* BEST PACKAGE GAME2

Number of **unplanned** interruptions 3 hours entitling you to compensation: better than now at 3 or more

Automatic compensation for ALL interruption standards

Ongoing commitment to undergrounding **#G2V3L2C#** of overhead lines pa in national parks and areas of natural beauty

* WORST PACKAGE 2

Number of **unplanned** interruptions 3 hours entitling you to compensation: worse than now at 5 or more

Current compensation arrangements, ie customers have to claim

No additional overhead lines to be undergrounded to reduce visual impact

* VARIABLE 4 - COST
* LEVEL 1 - 1%-4% decreases
* LEVEL 2 - current
* LEVEL 3 - 1%-4% increases
* LEVEL 4 - 5%-8% increases

Your annual electricity bill would decrease from **CURRENT BILL** to **CURRENT BILL – LEVEL 1**

Your annual electricity bill would stay the same **CURRENT BILL**

Your annual electricity bill would increase from **CURRENT BILL** to **CURRENT BILL + LEVEL 3**

Your annual electricity bill would increase from **CURRENT BILL** to **CURRENT BILL + LEVEL 4**

Which choice would you prefer?
CHOICE A
CHOICE B

RELATIVE PRIORITIES

Q 1 Q22
Thank you for going through those exercises with me.

Could you now tell me how you would feel if you were to get an additional power cut over the next 12 months that you were not warned about? Please use a scale of 1 to 4, where 1 is equal to extremely unhappy, 2 to very unhappy, 3 to quite unhappy and 4 to indifferent.

extremely unhappy
very unhappy
quite unhappy
indifferent

Q 10 Q23
And using the same scale, how would you feel if you were to get an additional power cut over the next 12 months that you were warned about?

Q 1 Q24
And how would you feel if the length of the power cut was to increase from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +20) MINS?

extremely unhappy
very unhappy
quite unhappy
indifferent

Q 1 Q25
If you were to call your distribution company in the event of a power cut and were to receive an automated message providing information about the cut and measures being taken to address it, would you then prefer to hold for an operator to report the cut or receive further information, or would you prefer to be able to call back on a dedicated priority number. Calls to the dedicated number would be likely to be answered more quickly because of the smaller volume of calls to that number.

prefer to hold
prefer to call back
neither, auto message enough
Don't know

DEMOGRAPHICS & CONTEXTUAL QUESTIONS

Q 1 Q26
Finally I would like to ask you a couple of questions to help with the analysis of this survey. First, do you have any health problems, a disability or a long term illness that restricts your daily activities or the work that you do?

Yes
No
Refused

Q 3 Q27
How many, if any, children do you have in your household under the age of 5?
L 0
H 50

Q 1 Q28
And which of the following best describes your total annual household income, before tax and other deductions?

under £10,000
£10,000 - £20,000
£20,001 - £30,000
£30,001 - £40,000
£40,001 - £50,000
£50,001 - £60,000
over £60,000
Don't know
Refused

Q 1 Q29
Which of the following age bands do you fall into?

NOTE: THIS CAN BE RECORDED FROM THE RECRUITMENT QUESTIONNAIRE IF YOU HAVE IT TO HAND.

16-19
20-29
30-39
40-49

50-59
60+
Refused/ns

Q 1 Q30
And what is the occupation of the chief wage earner in your household?

NOTE: THIS CAN BE RECORDED FROM THE RECRUITMENT QUESTIONNAIRE IF YOU HAVE IT TO HAND.

IF NOT, ENTER RESPONSE IN NOTEPAD AND CODE SEG BELOW ACCORDINGLY

AB (in NOTE)
C1C2 (in NOTE)
DE (in NOTE)
Don't know (in NOTE)
Refused

Q 1 Q31

INTERVIEWER: CODE GENDER OF RESPONDENT.(DO NOT ASK)

Male
Female

END OF INTERVIEW

Q 0 ThankU
THAT WAS THE LAST QUESTION.

Please can I take a note of your name and telephone number for quality control purposes

---

Q 2 NAME
Respondent name:

Q 2 WkTel
Home Telephone:

Q 0 END
That was the last question. Thank you very much for taking part in this research.

INTERVIEWER: HAND RESPONDENT THANK YOU LETTER AND INCENTIVE.

Q 1 STATUS2

INTERVIEWER: PLEASE RE-ENTER WHETHER REAL OR PRACTICE INTERVIEW

real interview
practice interview

Q 1 MRSCODE

INTERVIEWER: DO YOU CONFIRM THAT THIS INTERVIEW WAS CONDUCTED UNDER THE TERMS OF THE MARKET RESEARCH SOCIETY CODE OF CONDUCT AND IS COMPLETELY CONFIDENTIAL

Yes
No

APPENDIX C

Business Questionnaires

Phase 2 Main Business

INTERVIEWER DETAILS

Q 1 STATUS
INTERVIEWER: IS THIS A REAL OR PRACTICE INTERVIEW?

real interview
practice interview

Q 3 INTNO
INTERVIEWER: PLEASE ENTER YOUR FOUR DIGIT INTERVIEWER NUMBER

L 1000
H 9999

Q 1 CHECK
DOES THE RESPONDENT HAVE THE SHOW MATERIAL TO HAND; PLEASE CHECK AND DO NOT PROCEED UNTIL THEY DO OR ARRANGE TO CALL THEM BACK

proceed

Q 3 QNO
INTERVIEWER: PLEASE ENTER THE RECRUITMENT QUESTIONNAIRE NUMBER

L 1
H 9999

Q 1 SET
INTERVIEWER: PLEASE ENTER THE SET NUMBER

SET 1
SET 2
SET 3
SET 4
SET 5
SET 6

Q 2 URN
INTERVIEWER: PLEASE ENTER URN FROM SAMPLE

Q 1 SITE
INTERVIEWER: PLEASE ENTER RESPONSE TO Q1 ON THE RECRUITMENT QUESTIONNAIRE

head office
site

Q 2 SITE2
IF #SITE# EQ 2 GO TO DNO

INTERVIEWER: PLEASE TYPE IN TOWN AT WHICH THE SITE IN QUESTION IS LOCATED FROM Q1B ON THE RECRUITMENT QUESTIONNAIRE

Q 1 DNO

INTERVIEWER: PLEASE ENTER THE DNO AREA FROM WHICH SAMPLE IS DRAWN; SEE RQ

Aquila
EPN (EDF)
EME
Manweb (SP)
NEDL

Scottish Hydro Electric
Scottish Power
Southern Electric
SPN (EDF)
United Utilities
WPD South-Wales
WPD South-West
YEDL

MAIN INTERVIEW: Background

Q 0 INTRO
Thank you for agreeing to take part in this survey. As I have said, any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. You do not have to answer questions you do not wish to and you can terminate the interview at any point.

Q 2 POSTCODE1
IF #SITE# EQ 2 GO TO POSTCODE2
Can I begin by asking you for the first half of the postcode for the address of your site in #SITE2#, as this will help with our analysis.

INTERVIEWER: PLEASE ENTER THE FIRST HALF OF THE POSTCODE, eg:
IF FULL POSTCODE IS RG12 8QT PLEASE ENTER RG12
IF FULL POSTCODE IS RG1 5TT PLEASE ENTER RG1
-

Q 2 POSTCODE2
IF #SITE# EQ 1 GO TO INTRO2
Can I begin by asking you for the first half of the postcode for your company's address, as this will help with our analysis.

INTERVIEWER: PLEASE ENTER THE FIRST HALF OF THE POSTCODE, eg:
IF FULL POSTCODE IS RG12 8QT PLEASE ENTER RG12
IF FULL POSTCODE IS RG1 5TT PLEASE ENTER RG1

Q 0 INTRO2
This interview is about electricity distribution rather than supply. In other words, it is about the company that runs the local network of wires or cables that transmit electricity, rather than the company that you pay the bills to. As you are probably aware, distributors are responsible for:

* restoring the power supply if there is a power cut
* operating a safety & security enquiry service for any problems with live cables
* connecting customers to their local network
* and investigating any complaints or problems that customers have regarding their electricity distribution service.

Q 5 ELECBILL
Can you please tell me what you pay each year for your electricity at this #SITE2# site?

INTERVIEWER: IT IS ESSENTIAL TO GET THIS INFORMATION. IF THE RESPONDENT KNOWS A MONTHLY AMOUNT MULTIPLY THIS BY 12; IF THEY KNOW A QUARTERLY AMOUNT MULTIPLY THIS BY 4 (BUT TRY TO GET A DISTINCTION BETWEEN WINTER AND SUMMER MONTHS AND CALCULATE ACCORDINGLY).

L 1
H 999999999

Q 1 BILLCHECK
Your electricity bill for the year is roughly, or exactly, #ELECBILL#. Is this correct?

Yes
no

IF #BILLCHECK# EQ 1 GO TO BILLCALC
IF #BILLCHECK# EQ 2 GO TO ELECBILL

Q 5 BILLCALC
V 5 BILLCAL
M BILLCAL [= #ELECBILL# P 25]
F 1 #BILLCAL#

Q 0 DISTBILL
About 25% of your current electricity bill currently goes towards electricity distribution, which means that, at this #SITE2# site, about #BILLCALC# of your annual bill goes towards distribution.

EXPERIENCES

Q 0 INTRO3
The remainder of this questionnaire is split into a number of sections. In the first section I would like to look at your experiences with respect to electricity distribution issues.

Firstly, can you tell me if you have experienced any of the following in the past 12 months at this #SITE2# site:

Q 1 Q1
Any unplanned power cuts lasting more than 3 minutes, ie any that you were ^C15not^C07 warned about?
Yes
A no
Don’t know/can't remember

Q 3 Q2
IF #Q1# NE 1 GO TO Q4
How many of these unplanned cuts have you had in the past twelve months?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 3 Q3
On the last occasion that you had an unplanned power cut in excess of 3 minutes, how long did it last?

INTERVIEWER: RECORD IN MINUTES (eg 1 HOUR = 60, 2 HOURS 120 ETC); RECORD 9999 FOR DON'T KNOW
L 1
H 9999

Q 1 Q4
And have you experienced any planned power cuts (ie ones that you were given advance warning of) lasting more than 3 minutes in the past 12 months at this #SITE2# site?

Yes
no
Don’t know/can't remember

Q 3 Q5
IF #Q4# NE 1 GO TO Q7
How many of these planned cuts have you had in the past twelve months?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 3 Q6
On the last occasion that you had a planned power cut in excess of 3 minutes, how long did it last?

INTERVIEWER: RECORD IN MINUTES (eg 1 HOUR = 60, 2 HOURS 120 ETC); RECORD 9999 FOR DON'T KNOW
L 1
H 9999

Q 1 Q7
IF #Q1# NE 1 GO TO Q13
On the last occasion that you experienced an unplanned power cut, did you try and contact your electricity distributor?

Yes
no
Don’t know

Q 1 Q8
IF #Q7# NE 1 GO TO Q13
Did you manage to get through?

Yes
no
Don’t know/can't remember

Q 3 Q9
IF #Q8# NE 1 GO TO Q13
How long did you take to get through initially, whether to an automated message or a person?

DO NOT PROMPT

INTERVIEWER: RECORD IN SECONDS; RECORD 999 FOR DON'T KNOW

L 1
H 999

Q 1 Q10
Did you get an:

1. Automated message
2. Speak to someone
3. Both
Automated message
Spoke to someone
Both
Don’t know/can't remember

Q 1 Q11
Did you get the information you wanted?

Yes
no
Don’t know/can't remember

Q 1 Q12
IF #Q11# NE 1 GO TO Q13
Was the information about the power cut correct?

Yes
no
Don’t know/can't remember

EXPECTATIONS ABOUT POWER SUPPLY

Q 1 Q13
Do you believe that it is reasonable for a power cut to occur in a major storm?

Yes
no
Don’t know/not stated

Q 3 Q14
And what is the maximum number of unplanned power cuts lasting more than three hours that a company should be allowed in any one year before compensation is paid to their customers?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 1 Q15
In normal conditions, how quickly would you expect power to be restored following an unplanned power cut?

DO NOT PROMPT

1. within 1 hour
2. within 1-2 hours
3. within 2-3 hours
4. within 4-5 hours
5. within 6-10 hours
6. within 11-15 hours
7. within 16-18 hours
8. 18 hours or more

within 1 hour
1-2 hours
2-3 hours
4-5 hours
6-10 hours
11-15 hours
16-18 hours
18 hours or more
Don’t know

Q 3 Q16
And in normal conditions, after how long (ie after how many hours of a power cut) should a distributor be required to pay compensation to a consumer?

INTERVIEWER: IF RESPONDENT SAYS "IMMEDIATELY" PLEASE ENTER "0

L 0
H 999

Q 3 Q17
If there had been a major storm affecting 1% of customers in your distribution company's area, how quickly would you expect power to be restored in such a case, to the nearest hour?

DO NOT PROMPT

ENTER RESPONSE IN HOURS; ENTER 999 FOR DON'T KNOW

L 1
H 999

Q 1 Q18
Do you think that distribution companies should be doing more to reduce the impact of severe weather on their networks?

Yes
no
Don’t know

ATTITUDES TOWARDS STANDARDS & TARGETS

Q 0 INTRO4
Ofgem, the regulator for the gas and electricity market, has put in place a number of standards which distributors are required to meet. If they fail to meet them then customers are entitled to compensation. I am going to run through some of the standards and ask a question about each?

Q 1 Q19
Distributors should restore consumers' supplies within 18 hours following unplanned interruptions. Failure to do so results in a penalty payment of £100 for business consumers for the first 18 hrs plus £25 for each additional 12 hours.

Were you aware of this standard?

1 aware of standard, but not amount of compensation
2. aware of standard & amount of compensation
3. unaware of standard or compensation

aware, but not of comp
aware of both
unaware

Q 1 Q20
Consumers are entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year

Were you aware of this Standard?

1. aware of standard, but not amount of compensation
2. aware of standard & amount of compensation
3. unaware of standard or compensation

aware, but not of comp
aware of both
unaware

Q 1 Q21
Consumers must be given at least 2 days notice of a planned power cut. Failure to do so results in a penalty payment of £40 for business consumers.

Were you aware of this standard?

1. aware of standard, but not amount of compensation
2. aware of standard & amount of compensation
3. unaware of standard or compensation

aware, but not of comp
aware of both
unaware

S STATED PREFERENCE

Q 0 SPINTRO1A
I am now going to go through four exercises with you, each of which will look at your preferences for a number of **changes** that distribution companies could make to the service that they provide.

The first will look at:

the number of power cuts greater than 3 minutes experienced in rural areas over 5 years
the number of power cuts greater than 3 minutes experienced in urban areas over 5 years
and the average length of these power cuts.

Q 0 SPINTRO1C
You will be presented with six sets of choice pairs and will be asked in each case to say whether you prefer Option A or B. You may not like either, but please say which you would prefer in each instance.

* variable 1 DESIGN (Number of power cuts (3 mins) in rural areas over 5 years

More power cuts in rural areas:
- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA+1/2/3) over 5 years

The same number of power cuts in rural areas:
- ie an average of (DNO SPECIFIC DATA) in 5 years

Fewer power cuts in rural areas:
- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA –1/2/3)over 5 years

* variable 2 design (Number of power cuts (3 mins) in urban areas over 5 years

More power cuts in urban areas:
- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +1)over 5 years

The same number of power cuts in urban areas:
- ie an average (DNO SPECIFIC DATA) cuts in 5 years

Fewer power cuts in urban areas:
- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA -1)over 5 years

* variable 3 design (Average length of power cuts (3 mins) experienced by customers:)

Longer average power cut duration:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +5/10/15/20) minutes

No change in average power cut duration:- ie an average of (DNO SPECIFIC DATA) minutes

Shorter average power cut duration:- ie from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA – 5/10/15/20) minutes

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO2A
In this second exercise we are going to look at:

- the resilience of your local company's electricity system in a major storm
- provision of information during a power cut

You will see that in the resilience options we talk about your local company's electricity system being designed and operated so that the likelihood of more than 1% of its customers losing power for more than 24 hours following a major storm is reduced. Please note that 1% of your distributors customers is (DNO SPECIFIC DATA).

Q 0 SPINTRO2B
With this in mind, which of the following would you prefer?

* variable 1 DESIGN (electricity system)
Your local company's electricity system will be designed and operated so that the likelihood of more than 1% of its customers losing power for more than 24 hours following a major storm is once a year, as now

Your local company's electricity system will be designed and operated so that the likelihood of more than 1% of its customers losing power for more than 24 hours following a major storm is **once every 2 years**, better than now

Your local company's electricity system will be designed and operated so that the likelihood of more than 1% of its customers losing power for more than 24 hours following a major storm **once every 5 years,** better than now

* variable 2 design (Provision of information)

Current level of information:
- (DNO SPECIFIC DATA) of callers receive information by automated message
(DNO SPECIFIC DATA) of callers are answered by a person on average in (DNO SPECIFIC DATA) seconds (this including some customers who have already heard an automated message)

Current level of information provision during a power cut, but with call backs by a person every 2 hours to provide updated information, if requested

A dedicated helpline for business customers with (DNO SPECIFIC DATA)of callers answered by a person (as now) but within half the current time

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO3A
We are now going to look at:

- the maximum time taken to restore customers following storms
- the number of UNPLANNED interruptions greater than 3 hours which would entitle you to a compensation payment
- compensation arrangements

Q 0 SPINTRO3B
When considering these options please be aware that, with respect to UNPLANNED interruptions greater than 3 hours, consumers are currently entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year.

And with respect to the compensation arrangements, please bear in mind that the current standard is as follows (and as shown in SHOWCARD A2 which has been sent to you):

INTERVIEWER: READ OUT

1Distributors should restore consumers' supplies within 18 hours following unplanned interruptions. Failure to do so results in a penalty payment of £100 for business consumers for the first 18 hrs plus £25 for each additional 12 hours.

Q 0 SPINTRO3D
With this in mind, which of the following would you prefer?

Q 0 SPINTRO3E

INTERVIEWER: PLEASE REFER TO SHOWCARD A AND READ OUT THE DEFINITION OF 'HIGHER LEVEL OF COMPENSATION'.

* variable 1 DESIGN (Maximum time taken to restore customers following storms)

The maximum time taken to restore customers following storms would be within 60 hours, worse than now

The maximum time taken to restore customers following storms would be within 48 hours, as now

The maximum time taken to restore customers following storms would be within **36 hours**, better than now

The maximum time taken to restore customers following storms would be within **24 hours**, better than now

* variable 2 design (Number of UNPLANNED interruptions greater than 3 hours which entitles you to a compensation payment is:)

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be worse than now at 5 or more interruptions

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be as now, ie or more interruptions

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be better than now at 3 or more interruptions

* variable 3 design (Compensation under the 18 hour restoration standard)

Current compensation arrangements, ie £100 compensation for cuts greater than 18 hours and £25 for each additional 12 hours; compensation must be claimed

£100 compensation for cuts greater than 14 hours (rather than 18 hours) and **£25** for each additional 12 hours; **compensation must be claimed**

Compensation for cuts over 14 hours is the greater of **£100 and 2% of your annual electricity bill** and compensation for each additional 12 hours the greater of **£25 and 0.5% of your bill; compensation must be claimed**

Higher level of compensation; **compensation will be automatic**

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO4A
In this final exercise you will see both the best and worse options of all areas that we have just looked at in the first three exercises.

In addition, because no improvements would be possible without investment by the distribution companies – and consequently an increase in your electricity bill - you will also see the impact that the improvements shown would have on this site's overall electricity bill in year one and in subsequent years.

Bearing this in mind, we would once again like you to say which of the options you would prefer, A or B.

Q 0 SPINTRO4B

INTERVIEWER: PLEASE REFER TO SHOWCARD A AND READ OUT THE DEFINITION OF 'HIGHER LEVEL OF COMPENSATION'.

* variable 1 DESIGN (EXERCISE 1 LEVELS)
* level 1 best Ex 1 package

Fewer rural cuts over 5 years: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA)

Fewer urban cuts over 5 years: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA)

Shorter average cut duration: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA) minutes

* level 2 worst Ex 1 package

More rural cuts over 5 years: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA)

More urban cuts over 5 years: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA)

Longer average cut duraion: from (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA) minutes

* variable 2 design (EX 2 LEVELS)
* BEST PACKAGE GAME2

Likelihood of 1% customers losing power for 24 hours following a major storm is once every 5 years, better than now

A dedicated helpline for business customers with (DNO SPECIFIC DATA) of callers answered by a person (as now) but within half the current time

* WORST PACKAGE 2

Likelihood of 1% of customers losing power for 24 hours following a major storm is once a year, as now

Current level of information provision during a cut

* variable 3 design (EX 3 LEVELS)
* BEST EX 3 PACKAGE

Maximum restoration time following a storm better than now: within 24 hours

Number of **unplanned** interruptions 3 hours entitling you to compensation: better than now at 3 or more

Higher level of compensation; compensation will be automatic

* WORST EX 3 PACKAGE

Maximum restoration time following a storm worse than now: within 60 hours

Number of **unplanned**- interruptions 3 hours entitling you to compensation worse than now at 5 or more

Current compensation arrangements & compensation must be claimed

* VARIABLE 4 - COST
* LEVEL 1 - 1%-4% decreases
* LEVEL 2 - current
* LEVEL 3 - 1%-4% increases
* LEVEL 4 - 5%-8% increases

Your annual electricity bill would decrease from **CURRENT BILL** to **CURRENT BILL – LEVEL 1**

Your annual electricity bill would stay the same **CURRENT BILL**

Your annual electricity bill would increase from **CURRENT BILL** to **CURRENT BILL + LEVEL 3**

Your annual electricity bill would increase from **CURRENT BILL** to **CURRENT BILL + LEVEL 4**

Which choice would you prefer?
CHOICE A
CHOICE B

RELATIVE PRIORITIES

Q 1 Q22
Thank you for going through those exercises with me.

Could you now tell me how you would feel if you were to get an additional power cut over the next 12 months that you were not warned about? Please use a scale of 1 to 4, where 1 is equal to extremely unhappy, 2 to very unhappy, 3 to quite unhappy and 4 to indifferent.

extremely unhappy
very unhappy
quite unhappy
indifferent

Q 10 Q23
And using the same scale, how would you feel if you were to get an additional power cut over the next 12 months that you were warned about?

Q 1 Q24

And how would you feel if the length of the power cut was to increase from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +20)MINS?

extremely unhappy
very unhappy
quite unhappy
indifferent

Q 1 Q25
If you were to call your distribution company in the event of a power cut and were to receive an automated message providing information about the cut and measures being taken to address it, would you then prefer to hold for an operator to report the cut or receive further information, or would you prefer to be able to call back on a dedicated priority number. Calls to the dedicated number would be likely to be answered more quickly because of the smaller volume of calls to that number.

prefer to hold
prefer to call back
neither, auto message enough
don't know

DEMOGRAPHICS & CONTEXTUAL QUESTIONS

Q 1 Q26
Finally I would like to ask you a couple of questions to help with the analysis of this survey. How many sites (in the UK) does your company have?

one only
more than one
Don't know

Q 1 Q27
Under which of the following sectors would the activity of your company be classified?

READ OUT

1. Agriculture Forestry & Fishing
2. Mining
3. Construction
4. Manufacture Of Chemicals/Refining
5. Metal Goods And Engineering
6. Animal & Dairy Products & Vegetable processing
7. Manufacture of Miscellaneous Foods and Drink
8. Wholesale/Retail Distribution
9. Financial services
A. Pubs, Clubs, Restaurants and Hotels
B. Hospitals, Nursing and Medical Care
C. Education
D. Sport, Recreation and Other Personal Services
E. Central/local government
F. Professional services
Agriculture
Mining
Construction
Man. Chemicals
Metal Goods
Animal & Dairy
Man Misc. Foods
Wholesale/Retail
Financial services
Pubs, Clubs etc
Hospitals etc
Education
Sport etc

Central/local government
Prof services
Other (specify)

END OF INTERVIEW

Q 0 ThankU
THAT WAS THE LAST QUESTION.

Please can I take a note of your name and telephone number for quality control purposes

Q 2 NAME
Respondent name:

Q 2 WkTel
Work Telephone:

Q 0 END
That was the last question. Thank you very much for taking part in this research.

Q 1 RQ5
ENTER RESPONSE TO RQ Q4: Is the maximum electricity demand for the organisation:
1MW+
100KW - <1MW
<100KW
Don't know

Q 1 RQ6
ENTER RESPONSE TO RQ Q5: approximate cost of their annual electricity bill?
More than £159,000
£15,000-£159,000
<£15,000
Don't know
A not asked

Q 2 URN2

INTERVIEWER: PLEASE RE-ENTER URN FROM SAMPLE

Q 1 STATUS2

INTERVIEWER: PLEASE RE-ENTER WHETHER REAL OR PRACTICE INTERVIEW

real interview
practice interview

Q 1 MRSCODE

INTERVIEWER: DO YOU CONFIRM THAT THIS INTERVIEW WAS CONDUCTED UNDER THE TERMS OF THE MARKET RESEARCH SOCIETY CODE OF CONDUCT AND IS COMPLETELY CONFIDENTIAL

Yes
no

Phase 2 Main Business LPN

INTERVIEWER DETAILS

Q 1 STATUS

INTERVIEWER: IS THIS A REAL OR PRACTICE INTERVIEW?

real interview
practice interview

Q 3 INTNO

INTERVIEWER: PLEASE ENTER YOUR FOUR DIGIT INTERVIEWER NUMBER

L 1000
H 9999

Q 1 CHECK

DOES THE RESPONDENT HAVE THE SHOW MATERIAL TO HAND; PLEASE CHECK AND DO NOT PROCEED UNTIL THEY DO OR ARRANGE TO CALL THEM BACK

proceed

Q 1 SET
Can I confirm which set of showcards you have in front of you. The set number is shown in the header.

Set 1
Set 2
Set 3
Set 4
Set 5

Q 3 QNO

INTERVIEWER: PLEASE ENTER THE RECRUITMENT QUESTIONNAIRE NUMBER

L 1
H 9999

Q 2 URN

INTERVIEWER: PLEASE ENTER URN FROM SAMPLE

Q 1 SITE

INTERVIEWER: PLEASE ENTER RESPONSE TO Q1 ON THE RECRUITMENT QUESTIONNAIRE

head office
site

Q 2 SITE2
IF #SITE# EQ 2 GO TO DNO

INTERVIEWER: PLEASE TYPE IN TOWN AT WHICH THE SITE IN QUESTION IS LOCATED FROM Q1B ON THE RECRUITMENT QUESTIONNAIRE

Q 1 DNO

INTERVIEWER: PLEASE ENTER THE DNO AREA FROM WHICH SAMPLE IS DRAWN; SEE RQ

NOTE, IT CAN ONLY BE LPN FOR THIS QUESTIONNAIRE, IF IT IS ANY OTHER DNO YOU NEED TO CLOSE THIS QUESTIONNAIRE AND OPEN THE NORMAL BUSINESS QUESTIONNAIRE.

LPN (EDF)

MAIN INTERVIEW: Background

Q 0 INTRO
Thank you for agreeing to take part in this survey. As I have said, any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. You do not have to answer questions you do not wish to and you can terminate the interview at any point.

Q 2 POSTCODE1
IF #SITE# EQ 2 GO TO POSTCODE2
Can I begin by asking you for the first half of the postcode for the address of your site in #SITE2#, as this will help with our analysis.

INTERVIEWER: PLEASE ENTER THE FIRST HALF OF THE POSTCODE, eg:
IF FULL POSTCODE IS RG12 8QT PLEASE ENTER RG12
IF FULL POSTCODE IS RG1 5TT PLEASE ENTER RG1

Q 2 POSTCODE2
IF #SITE# EQ 1 GO TO INTRO2
Can I begin by asking you for the first half of the postcode for your company's address, as this will help with our analysis.

INTERVIEWER: PLEASE ENTER THE FIRST HALF OF THE POSTCODE, eg:
IF FULL POSTCODE IS RG12 8QT PLEASE ENTER RG12
IF FULL POSTCODE IS RG1 5TT PLEASE ENTER RG1

Q 0 INTRO2
This interview is about electricity distribution rather than supply. In other words, it is about the company that runs the local network of wires or cables that transmit electricity, rather than the company that you pay the bills to. As you are probably aware, distributors are responsible for:

* restoring the power supply if there is a power cut
* operating a safety & security enquiry service for any problems with live cables
* connecting customers to their local network
* and investigating any complaints or problems that customers have regarding their electricity distribution service.

Q 5 ELECBILL
Can you please tell me what you pay each year for your electricity at this #SITE2# site?

INTERVIEWER: IT IS ESSENTIAL TO GET THIS INFORMATION. IF THE RESPONDENT KNOWS A MONTHLY AMOUNT MULTIPLY THIS BY 12; IF THEY KNOW A QUARTERLY AMOUNT MULTIPLY THIS BY 4 (BUT TRY TO GET A DISTINCTION BETWEEN WINTER AND SUMMER MONTHS AND CALCULATE ACCORDINGLY).

L 1
H 999999999

Q 1 BILLCHECK
Your electricity bill for the year is roughly, or exactly, #ELECBILL#. Is this correct?

Yes
No

IF #BILLCHECK# EQ 1 GO TO BILLCALC
IF #BILLCHECK# EQ 2 GO TO ELECBILL

Q 5 BILLCALC
V 5 BILLCAL
M BILLCAL [= #ELECBILL# P 25]
F 1 #BILLCAL#

Q 0 DISTBILL
About 25% of your current electricity bill currently goes towards electricity distribution, which means that, at this #SITE2# site, about #BILLCALC# of your annual bill goes towards distribution.

EXPERIENCES

Q 0 INTRO3
The remainder of this questionnaire is split into a number of sections. In the first section I would like to look at your experiences with respect to electricity distribution issues.

Firstly, can you tell me if you have experienced any of the following in the past 12 months at this #SITE2# site:

Q 1 Q1
Any unplanned power cuts lasting more than 3 minutes, ie any that you were ^C15not^C07 warned about?

Yes
No
Don’t know/can't remember

Q 3 Q2
IF #Q1# NE 1 GO TO Q4
How many of these unplanned cuts have you had in the past twelve months?

NTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 3 Q3
On the last occasion that you had an unplanned power cut in excess of 3 minutes, how long did it last?

INTERVIEWER: RECORD IN MINUTES (eg 1 HOUR = 60, 2 HOURS 120 ETC); RECORD 9999 FOR DON'T KNOW
L 1
H 9999

Q 1 Q4
And have you experienced any planned power cuts (ie ones that you were given advance warning of) lasting more than 3 minutes in the past 12 months at this #SITE2# site?

Yes
No
Don’t know/can't remember

Q 3 Q5
IF #Q4# NE 1 GO TO Q7
How many of these planned cuts have you had in the past twelve months?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 3 Q6
On the last occasion that you had a planned power cut in excess of 3 minutes, how long did it last?

INTERVIEWER: RECORD IN MINUTES (eg 1 HOUR = 60, 2 HOURS 120 ETC); RECORD 9999 FOR DON'T KNOW
L 1
H 9999

Q 1 Q7
IF #Q1# NE 1 GO TO Q13

T On the last occasion that you experienced an unplanned power cut, did you try and contact your electricity distributor?

Yes
No
Don’t know

Q 1 Q8
IF #Q7# NE 1 GO TO Q13
Did you manage to get through?

Yes
No
Don’t know/can't remember

Q 3 Q9
IF #Q8# NE 1 GO TO Q13
How long did you take to get through initially, whether to an automated message or a person?

DO NOT PROMPT

INTERVIEWER: RECORD IN SECONDS; RECORD 999 FOR DON'T KNOW

L 1
H 999

Q 1 Q10
Did you get an:

1. Automated message
2. Speak to someone
3. Both
Automated message
Spoke to someone
Both
Don’t know/can't remember

Q 1 Q11
Did you get the information you wanted?

Yes
No
Don’t know/can't remember

Q 1 Q12
IF #Q11# NE 1 GO TO Q13
Was the information about the power cut correct?

Yes
No
Don’t know/can't remember

EXPECTATIONS ABOUT POWER SUPPLY

Q 1 Q13
Do you believe that it is reasonable for a power cut to occur in a major storm?

Yes
No
Don’t know/not stated

Q 3 Q14

And what is the maximum number of unplanned power cuts lasting more than three hours that a company should be allowed in any one year before compensation is paid to their customers?

INTERVIEWER: ENTER 999 FOR DON'T KNOW

L 0
H 999

Q 1 Q15
In normal conditions, how quickly would you expect power to be restored following an unplanned power cut?

DO NOT PROMPT

1. within 1 hour
2. within 1-2 hours
2. within 2-3 hours
3. within 4-5 hours
4. within 6-10 hours
5. within 11-15 hours
6. within 16-18 hours
7. 18 hours or more

within 1 hour
1-2 hours
2-3 hours
4-5 hours
6-10 hours
11-15 hours
16-18 hours
18 hours or more
Don’t know

Q 3 Q16
And in normal conditions, after how long (ie after how many hours of a power cut) should a distributor be required to pay compensation to a consumer?

INTERVIEWER: IF RESPONDENT SAYS "IMMEDIATELY" PLEASE ENTER "0

L 0
H 999

Q 3 Q17
If there had been a major storm affecting 1% of customers in your distribution company's area, how quickly would you expect power to be restored in such a case, to the nearest hour?

DO NOT PROMPT

ENTER RESPONSE IN HOURS; ENTER 999 FOR DON'T KNOW

L 1
H 999

Q 1 Q18
Do you think that distribution companies should be doing more to reduce the impact of severe weather on their networks?

Yes
No
Don’t know

ATTITUDES TOWARDS STANDARDS & TARGETS

Q 0 INTRO4

Ofgem, the regulator for the gas and electricity market, has put in place a number of standards which distributors are required to meet. If they fail to meet them then customers are entitled to compensation. I am going to run through some of the standards and ask a question about each?

Q 1 Q19
Distributors should restore consumers' supplies within 18 hours following unplanned interruptions. Failure to do so results in a penalty payment of £100 for business consumers for the first 18 hrs plus £25 for each additional 12 hours.

Were you aware of this standard?

1. aware of standard, but not amount of compensation
2. aware of standard & amount of compensation
3. unaware of standard or compensation

aware, but not of comp
aware of both
unaware

Q 1 Q20
Consumers are entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year

Were you aware of this Standard?

1. aware of standard, but not amount of compensation
2. aware of standard & amount of compensation
3. unaware of standard or compensation

aware, but not of comp
aware of both
unaware

Q 1 Q21
Consumers must be given at least 2 days notice of a planned power cut. Failure to do so results in a penalty payment of £40 for business consumers.

Were you aware of this standard?

1. aware of standard, but not amount of compensation
2. aware of standard & amount of compensation
3. unaware of standard or compensation

aware, but not of comp
aware of both
unaware

STATED PREFERENCE

Q 0 SPINTRO1A
I am now going to go through three exercises with you, each of which will look at your preferences for a number of **changes** that distribution companies could make to the service that they provide.

The first will look at:

- the number of power cuts greater than 3 minutes experienced in urban areas over 5 years
- the average length of these power cuts
- and the provision of information during a power cut.

Q 0 SPINTRO1B
You will be presented with six sets of choice pairs and will be asked in each case to say whether you prefer Option A or B. You may not like either, but please say which you would prefer in each instance.

* variable 1 design (Number of power cuts (3 mins) in urban areas over 5 years
More power cuts in urban areas:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA+1) over 5 years

The same number of power cuts in urban areas, - ie an average of (DNO SPECIFIC DATA) cuts in 5 years

Fewer power cuts in urban areas: - from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA -1) over 5 years

* variable 2 design (Average length of power cuts (3 mins) experienced by customers:)

Longer average power cut duration:- from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA +5/10/15/20) minutes

No change in average power cut duration:- ie an average of (DNO SPECIFIC DATA) minutes

Shorter average power cut duration:- ie from an average of (DNO SPECIFIC DATA) to (DNO SPECIFIC DATA – 5/10/15/20) minutes

Current level of information: **28%** of callers receive information by automated message **45%** of callers are answered by a person on average in **62** seconds (this including some customers who have already heard an automated message)

Current level of information provision during a power cut, **but with call backs by a person every 2 hours to provide updated information, if requested**

A **dedicated helpline for business customers** with **45%** of callers answered by a person (as now) but within half the current time

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO2A
In this second exercise we are going to look at:

the number of UNPLANNED interruptions greater than 3 hours which would entitle you to a compensation payment

compensation arrangements under the 18 hour restoration standard

---

Q 0 SPINTRO2B
When considering these options please be aware that, with respect to UNPLANNED interruptions greater than 3 hours, consumers are currently entitled to a penalty payment of £50 if they have 4 or more power cuts each longer than 3 hours in a single year.

And with respect to the compensation arrangements, please bear in mind that the current standard is as follows (and as shown in SHOWCARD A2 which has been sent to you):

INTERVIEWER: READ OUT

Distributors should restore consumers' supplies within 18 hours following unplanned interruptions. Failure to do so results in a penalty payment of £100 for business consumers for the first 18 hrs plus £25 for each additional 12 hours.

With this in mind, which of the following would you prefer?

Q 0 SPINTRO2C

INTERVIEWER: PLEASE REFER TO SHOWCARD A AND READ OUT THE DEFINITION OF 'HIGHER LEVEL OF COMPENSATION'.

* variable 1 design (Number of UNPLANNED interruptions greater than 3 hours which entitles you to a compensation payment is:)

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be worse than now at 5 or more interruptions

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be as now, ie or more interruptions

The number of **unplanned** interruptions greater than 3 hours which entitles you to a compensation payment would be better than 4 now at 3 or more interruptions

* variable 2 design (Compensation under the 18 hour restoration standard)
Current compensation arrangements, ie £100 compensation for cuts greater than 18 hours and £25 for each additional 12 hours; compensation must be claimed

£100 compensation for cuts greater than 14 hours (rather than 18 hours) and **£25** for each additional 12 hours; **compensation must be claimed**

Compensation for cuts over 14 hours is the greater of **£100 and 2% of your annual electricity bill** and compensation for each additional 12 hours the greater of **£25 and 0.5% of your bill; compensation must be claimed**

Higher level of compensation; **compensation will be automatic**

Which choice would you prefer?
CHOICE A
CHOICE B

Q 0 SPINTRO3A
In this final exercise you will see both the best and worse options of all areas that we have just looked at in the first two exercises.

In addition, because no improvements would be possible without investment by the distribution companies – and consequently an increase in your electricity bill - you will also see the impact that the improvements shown would have on this site's overall electricity bill in year one and in subsequent years.

Bearing this in mind, we would once again like you to say which of the options you would prefer, A or B.

Q 0 SPINTRO3B

INTERVIEWER: PLEASE REFER TO SHOWCARD A AND READ OUT THE DEFINITION OF 'HIGHER LEVEL OF COMPENSATION'.

GAME3A
* level 1 best Ex 1 package
Fewer urban cuts over 5 years: from 2 to 1

Shorter average cut duration: from 112 to 92 minutes

A dedicated helpline for business customers with 45% of callers answered by a person (as now) but within half the current time

* level 2 worst Ex 1 package
More urban cuts over 5 years: from 2 to 3

Longer average cut duration: from 112 to 132 minutes

Current level of information provision during a cut

* variable 2 design (EX 2 LEVELS)
* BEST PACKAGE GAME2
Number of **unplanned** interruptions 3 hours entitling you to compensation: better than now at 3 or more

Higher level of compensation; compensation will be automatic

* WORST PACKAGE 2
Number of **unplanned** interruptions 3 hours entitling you to compensation: worse than now at 5 or more

Current compensation arrangements & compensation must be claimed

* VARIABLE 3 - COST
* LEVEL 1 - 1%-4% decreases
* LEVEL 2 - current
* LEVEL 3 - 1%-4% increases
* LEVEL 4 - 5%-8% increases

Your annual electricity bill would decrease from **CURRENT BILL** to **CURRENT BILL – LEVEL 1**

Your annual electricity bill would stay the same **CURRENT BILL**

Your annual electricity bill would increase from **CURRENT BILL** to **CURRENT BILL + LEVEL 3**

Your annual electricity bill would increase from **CURRENT BILL** to **CURRENT BILL + LEVEL 4**

Which choice would you prefer?
CHOICE A
CHOICE B

RELATIVE PRIORITIES

Q 1 Q22
Thank you for going through those exercises with me.

Could you now tell me how you would feel if you were to get an additional power cut over the next 12 months that you were not warned about? Please use a scale of 1 to 4, where 1 is equal to extremely unhappy, 2 to very unhappy, 3 to quite unhappy and 4 to indifferent.

extremely unhappy
very unhappy
quite unhappy
indifferent

Q 10 Q23
And using the same scale, how would you feel if you were to get an additional power cut over the next 12 months that you were warned about?

Q 1 Q24
And how would you feel if the length of the power cut was to increase from an average of DNO SPECIFIC DATA to DNO SPECIFIC DATA +20 MINS?

extremely unhappy
very unhappy
quite unhappy
indifferent

Q 1 Q25
If you were to call your distribution company in the event of a power cut and were to receive an automated message providing information about the cut and measures being taken to address it, would you then prefer to hold for an operator to report the cut or receive further information, or would you prefer to be able to call back on a dedicated priority number. Calls to the dedicated number would be likely to be answered more quickly because of the smaller volume of calls to that number.

prefer to hold
prefer to call back
neither, auto message enough
Don’t know

DEMOGRAPHICS & CONTEXTUAL QUESTIONS

Q 1 Q26
Finally I would like to ask you a couple of questions to help with the analysis of this survey. How many sites (in the UK) does your company have?

one only
more than one
Don't know

Q 1 Q27
Under which of the following sectors would the activity of your company be classified?

READ OUT

1. Agriculture Forestry & Fishing
2. Mining
3. Construction
4. Manufacture Of Chemicals/Refining
5. Metal Goods And Engineering
6. Animal & Dairy Products & Vegetable processing
7. Manufacture of Miscellaneous Foods and Drink
8. Wholesale/Retail Distribution
9. Financial services
A. Pubs, Clubs, Restaurants and Hotels
B. Hospitals, Nursing and Medical Care
C. Education
D. Sport, Recreation and Other Personal Services
E. Central/local government
F. Professional services
Agriculture
Mining
Construction
Man. Chemicals
Metal Goods
Animal & Dairy
Man Misc. Foods
Wholesale/Retail
Financial services
Pubs, Clubs etc
Hospitals etc
Education
Sport etc
Central/local government
Prof services
Other (specify)

END OF INTERVIEW

Q 0 ThankU
THAT WAS THE LAST QUESTION.

Please can I take a note of your name and telephone number for quality control purposes

---

Q 2 NAME
Respondent name:

Q 2 WkTel
Work Telephone:

Q 0 END
That was the last question. Thank you very much for taking part in this research.

Q 1 RQ5
ENTER RESPONSE TO RQ Q4: Is the maximum electricity demand for the organisation:

1MW+
100KW - <1MW
<100KW
Don't know

Q 1 RQ6
ENTER RESPONSE TO RQ Q5: approximate cost of their annual electricity bill?

More than £159,000
£15,000-£159,000
<£15,000
Don't know
Not asked

Q 2 URN2
INTERVIEWER: PLEASE RE-ENTER URN FROM SAMPLE

Q 1 STATUS2
INTERVIEWER: PLEASE RE-ENTER WHETHER REAL OR PRACTICE INTERVIEW

real interview
practice interview

Q 1 MRSCODE
INTERVIEWER: DO YOU CONFIRM THAT THIS INTERVIEW WAS CONDUCTED UNDER THE TERMS OF THE MARKET RESEARCH SOCIETY CODE OF CONDUCT AND IS COMPLETELY CONFIDENTIAL

Yes
No

APPENDIX D

Show Material

SHOWCARD B

GROUP 1: BEST OPTION

- Fewer power cuts in rural areas: from x to x (SEE SCREEN) over 5 years
- Fewer power cuts in urban areas: from x to x (SEE SCREEN) over 5 years
- Shorter average power cut duration: from x to x (SEE SCREEN) minutes

GROUP 1: WORST OPTION

- More power cuts in rural areas: from x to x (SEE SCREEN) over 5 years
- More power cuts in urban areas: from x to x (SEE SCREEN) over 5 years
- Longer average power cut duration: from x to x (SEE SCREEN) minutes

GROUP 2: BEST OPTION

- Likelihood of more than 1% of customers losing power for more than 24 hours following a major storm is once every 5 years, better than now
- Current level of information provision during a power cut, plus a dedicated helpline for customers dependent on medical equipment requiring an electricity supply
- An ongoing commitment to undergrounding x% of overhead lines per annum in areas of outstanding natural beauty and national parks until all are undergrounded

GROUP 2: WORST OPTION

- Likelihood of more than 1% of customers losing power for more than 24 hours following a major storm is once a year, as now
- Current level of information provision during a power cut
- No additional overhead lines to be undergrounded to reduce the visual impact of those lines

GROUP 3: BEST OPTION

- The maximum time taken to restore customers following storms would be within 24 hours, better than now
- The number of **unplanned** interruptions over 3 hours entitling you to compensation payments would be better than now at 3 or more
- There is automatic compensation for ALL interruption standards

GROUP 3: WORST OPTION

- The maximum time taken to restore customers following storms would be within 60 hours, worse than now
- The number of **unplanned** interruptions over 3 hours entitling you to compensation payments would be worse than now at 5 or more
- Current compensation arrangements would apply, ie customers have to claim compensation under all the interruption standards.

SHOWCARD B – LPN Only

GROUP 1: BEST OPTION

- Fewer power cuts in urban areas: from x to x (SEE SCREEN) over 5 years
- Shorter average power cut duration: from x to x (SEE SCREEN) minutes
- Current level of information provision during a power cut, plus a dedicated helpline for customers dependent on medical equipment requiring an electricity supply

GROUP 1: WORST OPTION

- More power cuts in urban areas: from x to x (SEE SCREEN) over 5 years
- Longer average power cut duration: from x to x (SEE SCREEN) minutes
- Current level of information provision during a power cut

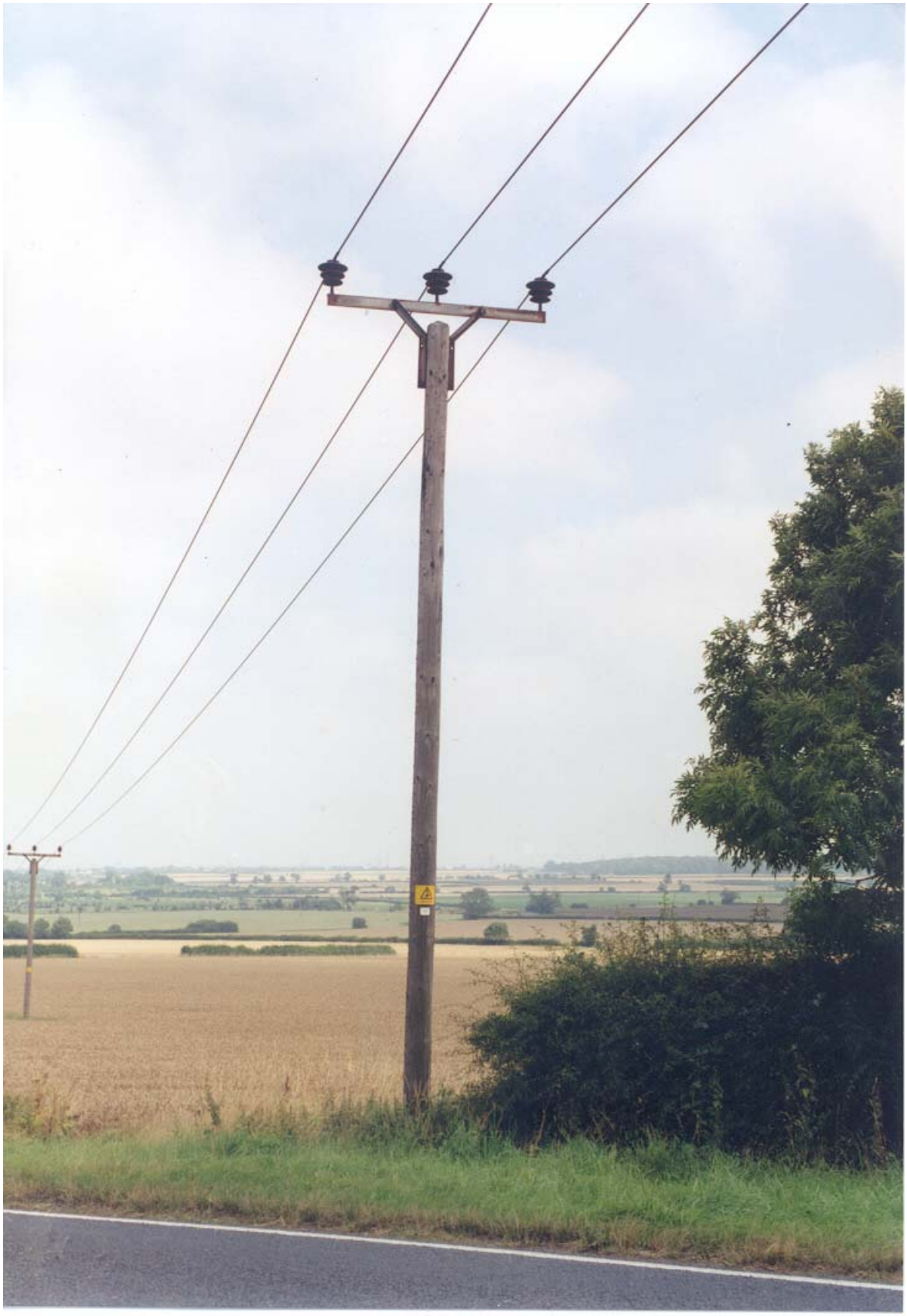
GROUP 2: BEST OPTION

- The number of **unplanned** interruptions over 3 hours entitling you to compensation payments would be better than now at 3 or more
- There is automatic compensation for ALL interruption standards
- An ongoing commitment to undergrounding x% of overhead lines per annum in areas of outstanding natural beauty and national parks until all are undergrounded

GROUP 2: WORST OPTION

- The number of **unplanned** interruptions over 3 hours entitling you to compensation payments would be worse than now at 5 or more
- Current compensation arrangements would apply, ie customers have to claim compensation under all the interruption standards.
- No additional overhead lines to be undergrounded to reduce the visual impact of those lines

SHOWCARD A



APPENDIX E

Individual DNO Business Results

Business WTP Values by individual DNO

Variable	Central Networks (West)	EDF Energy Networks (EPN)	Central Networks (East)	SP Manweb	NEDL	Scottish Hydro	Scottish Power	Southern Electric	EDF Energy Networks (SPN)	United Utilities	WPD (South Wales)	WPD (South West)	YEDL
Value per unplanned rural cut (reduction in frequency over 5 years from current)	0.56	0.00	0.00	1.59	0.00	0.00	1.66	0.00	0.00	0.00	1.19	0.00	0.00
Value per unplanned urban cut (reduction in frequency over 5 years from current)	3.48	3.94	3.25	4.87	4.12	0.00	9.75	2.48	5.35	8.14	2.65	3.37	5.61
Value per minute reduction to average cut	0.13	0.10	0.18	0.24	0.18	0.00	0.00	0.19	0.00	0.00	0.00	0.29	0.38
Reducing major cuts to one every 2 years	2.37	0.00	2.33	2.94	0.00	0.00	0.00	1.82	2.33	5.06	0.00	2.62	3.18
Reducing major cuts to one every 5 years	3.93	2.22	3.40	4.28	0.00	0.00	0.00	3.61	4.46	6.92	0.00	4.30	3.92
Call backs during outage if required	1.29	1.33	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10
Helpline	0.00	0.00	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum restoration time 60 hours (decrement)	0.00	5.55	5.50	5.23	7.31	0.00	6.67	3.26	7.13	3.85	2.74	0.00	2.63
Maximum restoration time 36 hours (improvement)	3.98	7.56	2.03	8.57	11.33	0.00	7.28	6.03	2.42	4.89	7.22	6.42	5.53
Maximum restoration time 24 hours (improvement)	4.87	1.39	2.50	9.65	5.01	0.00	13.22	4.35	5.52	5.71	6.07	10.94	7.54
Compensation paid after 5 cuts (decrement)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.72	0.00	0.00	3.75	0.00
Compensation paid after 3 cuts (improvement)	1.96	1.95	0.00	0.00	0.00	0.00	0.00	1.74	0.00	2.65	3.95	0.00	4.13
Current compensation but after 14 hours	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compensation after 14 hours based on bill size	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01	0.00
Higher compensation paid automatically	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80	0.00	0.00	0.00
Value of 20 minute reduction in average cut	2.54	1.94	3.54	4.78	3.59	0.00	0.00	3.88	0.00	0.00	0.00	5.78	7.66
Value of 40 minute reduction in average cut	5.08	3.89	7.09	9.56	7.17	0.00	0.00	7.76	0.00	0.00	0.00	11.55	15.31

Note: Cost coefficient for Scottish Hydro was insignificant so values cannot be derived